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AUGUST 1988 VOLUME 3(4)

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Fax: 0603 630374

Apple2000

August 1988

Apple2000
P.O.Box 3,
Liverpool,
L21 8PY
051 928 6143

CONTENTS

Editorial	Mick Knapp	2
Sensible Grammar	Keith Rookledge	4
Your Letters		6
816/Paint	Mick Knapp	10
More Letters		12
Hotline News	Dave Ward	14
GS Tips	Ewen Wannop	14
Members Small Ads		15
Algol-60	Dave Miller	17
Apple II Problems	The Boffin	20
PlusDISK	Dave Ward	21
IIGS Library	Ewen Wannop	24
Living with a SCSI Disc	Ewen Wannop	26
Apple News	The Nibbler	28
UDC Card	Bryn Jones	30
AppleWorks Q&A's	Simon Morrisby	31
PC Transporter	Steve Carter	38
What is your Format?	Dave Ward	41
Mac2000	Norah Arnold	42
Studio Session	Norah Arnold	44
MacSpin	John Arnold	46
News from Apple		50
Electronic Pen The Visual Arts	I & D Flaxman	52
Getting Started with Mac Programming		54
Word 4.0	Jeff Meyer	56
The Reality of DTP	David Hewson	60
Network News		62
ComServe	Irene Flaxman	66
AlphaPop Comments		68
HyperEasy	Irene Flaxman	69
Hypercard Info		70
Traffic4K		73
Intro to MacTel	David Nicholson-Cole	74
Macintosh Books		75
Apache Strike	Ceri Fisher	76
Apple Concourse		77
Mac Library		78
Mebers Small Ads		80
Advertisers Index		80

Important Contact Points

There are a number of ways to contact Apple2000.

Force users who have a query about the service can contact the administrator, John Lee, directly for help and advice. Call him on the number opposite or send a message to his box on the Force.

If you wish to order goods or services from Apple2000, call Irene on 051 928 6143 or (during office hours) call Alison on 0732 760115. Both have Ansafones, in case they're not around. Alternatively you can write to the PO Box or, if you use comms, you can leave orders on TABBS addressed to the SYSOP.

If you are experiencing problems with Apple hardware or software Dave Ward runs the Hotline and will get you out of the mire.

We are very interested in the activities of local user groups, and if you have any information which you would like publicised Tom Wright would like to hear from you.

Moans and Groans - We don't get many of these, but Mick Knapp has broad shoulders (and stomach, and thighs...) so send these to him via the PO Box.

A little praise for a few of our authors wouldn't go amiss. Send all comments via the PO box, especially suggestions about what you would like to see in **your** magazine.

The Force
John Lee
0151 [illegible]

Administration
Irene Flaxman
051 928 6143

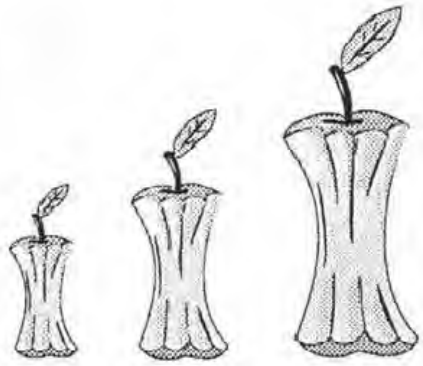
Advertising
Alison Davies
0732 760115

Hotline
Dave Ward
0689 [illegible]
Mon-Fri 1900-2100

TABBS
Ewen Wannop - SYSOP
0625 [illegible]

Local Groups
Tom Wright
0827 [illegible]

Editorial



Legal wrangles leave UK pricing unfair

The latest rumours about the "massive" legal action between Apple Inc. and Microsoft indicate that the whole action has been a ploy to attack Hewlett-Packard. This is very believable as it makes sense that two companies who have worked so very closely in the past would continue to be co-operative. Microsoft and Apple are mutual parasites, and although Apple's Claris organisation could give Apple some autonomy in publishing software for the Apple range it is unlikely that users of Word and Excel on the Macintosh will ever switch (sorry about the pun Mac users).

It would be totally illegal for Apple and Microsoft to officially "gang up" on another vendor, but if any of you have used Windows 2, the product which is supposed to have started all the fuss, you will appreciate how ludicrous the claims are that it is a copy of the Apple interface. It's rather like saying that a Lada is a copy of a Rolls Royce. They look similar and do similar things, but there is no copyright breach by either.

The irksome thing about reading about the friendly relationship continuing while the lawyers' fees pile up is the realisation that both companies make the money that pays those lawyers' fees by charging their customers in the UK (you and I) a completely different price to their U.S. customers.

An example of this was shown in the latest Microsoft product release for the Macintosh, a cut down version of Word called Microsoft Write. This cut down version will be available at lower cost, and it is available to the U.K. public for "just £125". Now it's not my intention to give advice on where to buy your software but I did happen to pick up a copy of Word3.01 in New York for £99.

A humorous virus

Personally I'm running out of interest in viruses as I have been fortunate enough not to catch any, but one little story was passed on to me which made me chuckle. It's probably a sign of the strength of the human ego, as it shows that not all virus authors can accept the ignominy of spreading the infection without collecting the "kudos".

I won't recount the whole story, but can a virus with a bug reporting procedure really be taken seriously? The virus in question is supposed to be benign, but really, viruses with an upgrade path????

This issues highlights

The editorial team of Apple2000 magazine are at last beginning to feel a little more comfortable as a team, and in the near future there will be an article explaining how this publication is put together by a team spread all around the country.

This issue carries an important review of the PC Transporter, the first product enabling an Apple// to run MS-DOS software. We consider this product so important that we are running a backup article next month.

In the Mac section, we've included a selection of artwork from Electronic Arts. This is one of the first collections of PostScript artwork to be produced in Britain.

Annual subscription rates are £25.00 for UK residents, £30.00 for E.E.C. residents and £35.00 for other overseas members.

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The Editorial team is:

Apple II	Macintosh
Ewen Wannop	Norah Arnold
Mick Knapp	Irene Flaxman

Many thanks to all those who work behind the scenes and who receive no personal credit. These people are the stalwarts of Apple2000.

Additional thanks to Walter Lewis of Old Roan Press (051-227-4818) for our printing service, and to Ian Sharp of Sharp Studios (051-227-2788) for our cover design. (Graphics for the cover design supplied by Apple Computer UK Ltd, Adobe Systems Inc., Cricket Software.)

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Sensible Grammar

Just the thing for Editors ...
a review by Keith Rookledge

All of us who use WP are faced by the problem of inability to spell and "typo's". There are a variety of spelling checkers available, perhaps the best option being as a desk top tool on the WP. Sensible Grammar have gone one step further and produced a package to check the text. Perhaps grammar is slightly misleading as it checks a variety of other faculties of one's work as well. Anyway, what's it all about? The goodies come well packaged and although it was originally produced in 1983 there is a update in 1986. The package consists of a ring back book which is well printed and packed and 2 discs, one 3.5 and one 5.25. You can send the size that you don't use back and get a copy of the other, which is a nice way of doing things. The system essentially compares sets of predetermined phrases with lists in memory. You are provided with some of these and can change them. The system is designed to be very flexible and it is, you are presented with a number of predetermined phrases and you can, add, delete, change or create new lists of your own at will. Sensible grammar is not a desk top tool. You have to create your WP file and it says that it will support a number of these, AppleWorks (which I use), AppleWriter in Prodos, Format 11 again in Prodos, Mouse Write, Mouse Word, PFS Write Prodos, Word Juggler and Zardax. The book of words is fairly straight forward, and there is a comprehensive tutorial detailing all the options. To get things going it is first necessary to produce a WP document. You then have to load Sensible Grammar and you are off. The menus are friendly and somewhat similar to Appleworks. The first option is to check punctuation, grammar or both. By using the arrow keys you move to the next menu which enters you into the phrase menu. This enables you to list all the phrases that one can check, add or delete phrases, set up your own lists of phrases or turn groups of phrases on and off. The last menu is a standard set up for the printer etc and contains a "quick Set up" option to help you on your way once you have set it up. Once you have loaded your WP document into the system and chosen both (why not do both punctuation and grammar checking at once?) the system checks each sentence at a time and identifies phrases and punctuation errors. The latter is very good as it identifies extra spaces as well as punctuation problems.

The list of phrases that one can choose from is :

Cliche Expressions
Contractions
Faulty Phrases
Informal Phrases
Legal Terms
Personal Terms
Pompous Phrases
Sexist Phrases
Vague Phrases
Wordy Phrases

When the system identifies a problem with a phrase you are led to a prompt, which enable you to insert the suggested new phrase or word, ignore the problem, replace the phrase or word, mark it and print. With errors in punctuation changes are simple and in addition the facility" mark" actually puts a mare on the designated place so that you can go back to the WP system to view your changes. Once all changes are made then you can save the document and in so doing Sensible Checker renames the old document "Old" and does not write over it. What else can it do? Well lots says the book of words. You can create your own interpreter of words by creating a phrase list of the English and foreign equivalent for example. There are in addition some options which enable those people who, can to alter advanced options by manipulation of ASCII codes. Powerful stuff this! One area where this package could be most useful is in the legal area. The capacity to change the simple to the legal is most impressive. I made just simple stuff very complicated for example:

Where then there are problems by this use things get worse becomes:

Wherein thereafter therein are problems in accordance herewith use things get worse!!!!!

Problems, well very few. It is not at once apparent to an Appleworker who has desk top options how it works. The necessity to create you WP text, boot Sensible Grammar, check it and then reboot is a problem. In addition some of the suggestions built in result in grammar which is just not right. For example a number of is replaced by several and the text will then read "that it will support several these". Obviously with use, these bugs can be ironed out. Sensible Grammar only checks what you do, it will not add punctuations but it is a useful product.

info

Product : Sensible Grammar
Maker: Sensible Software
Available from :
Business Sense
Computing
48 Priestpopple
Hexham
Northumberland NE46 1PP
✆ (0434) 605925
Price : £79.95 +VAT+P&P
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Letter Box

We open the postbag this month to find an avalanche of letters .....

[redacted]

Dear Mick,
What an interesting set of letters in the rather large letter section of the April issue of the Apple2000 magazine. I would like to comment upon some of the more interesting points raised in 3 of the letters :-

Huw Price's first letter eulogises Open-Apple magazine with good reason; it is an excellent magazine and few others can match the density of Apple // information contained therein. One point from his letter which I feel is important in that one can purchase a subscription to Open-Apple with credit cards. No mention of this appears in any of the Open-Apple advertisements that I have seen. The ability for foreigners to pay by credit card is important in that it saves the potential subscriber time and money and must encourage more people to part with their spondulicks.

Huw Price's second letter regarding the loss of an AppleWorks file was, strangely enough referred to in a recent Open-Apple magazine. The article in Open-Apple does not give a fix but does shed light on the problem. The article was mentioned to me by an Apple 2000 member who subscribes to Open-Apple and I have, unfortunately, forgotten the exact reference. I bet you are asking why I don't subscribe to Open-Apple!! Well I've sent off my subscription but the magazines have not yet appeared at the time of writing. While we are discussing this let us look at some of the ways of retrieving damaged or deleted files :-

One should, of course, always keep regular back-up copies in case of such problems. This minimises the amount of work one has to do to put things right. Its easy to say that and we have all been guilty of not taking back-up copies. If you think you have a problem the following comments may be of assistance :-

1) Wait until the disk drive stops. Any attempt to interrupt a disk that is being written to will only make matters worse.

2) Immediately remove the diskette and write protect it.

3) Try to make a copy of the disk. first using a standard disk copier.

4) If this doesn't work format a new diskette and attempt to copy over as many of the files as possible. Next attempt to make a copy of the diskette using a nibble copier. Never to use the suspect diskette in your attempt to recover files etc. Always use a copy even if it could only be made using a nibble copier - its better than nothing.

5) Using the copied diskette it may be possible to recover a deleted file by using a utility such as the UNDELETE function from the Copy][plus suite or CAT DOCTOR from the ProSel package, by Glen Bredon. Any files that you succeed to undelete should immediately copied to a newly formatted diskette. Then copy that diskette!! and use that copy to check out the files.

6) Huw Price's problem may be solved simply by undeleting the file; the diskette being otherwise intact.

7) Even diskettes with damaged sectors or blocks that seemingly cannot be read can sometimes be repaired using the editors supplied with nibble copiers. Indeed I have repaired such diskettes from time to time. Even if you fail first time save the diskette as your might get ideas later. Never give up.

8) Sometimes problems that occur are very difficult to put right. One way is to reproduce the problem on another 'known' diskette (use a copy, of course) and then compare the effect, before and after. This information may well assist you in repairing the real problem.

Peter Grant's letter which provides a 'Basic Fix for Tom' is most interesting in that he not only gives the popular method that is badly flawed but also gives the correct method. The first solution he gives is the one to use. Put bluntly it advises how to program correctly so that any DOS3.3 disk command always occurs as the first character on a new line. The problem simply arises through bad programming. The second method which most publish is badly flawed, in my opinion. Setting the D$ to CHR$(13)+CHR$(4) does always ensure that the DOS command occurs as the first character on a new line. Just consider what happens if you are writing to a text file and use the DOS command by itself to switch off writing to the disk so that you can write to the screen (see your DOS3.3 manual) - you write and extra carriage return to the file which may cause problems later when you attempt to read the file! What happens when you CLOSE a file immediately after writing? You get another unwanted carriage return. **Dave Ward**

[redacted]

Dear Apple2000,
Thank you for the recent Volume 3(3) of Apple2000.

My thanks go to all those who helped in its production - it is developing into a most interesting and useful magazine for those like myself who have not progressed to the 'Mac' and are still limited to the Apple IIe. Perhaps when time permits I shall put down on paper some of my own experiences with the IIe, which we have in regular commercial use within my office !

Sincere thanks again for your support. **David A. Newham**

[redacted]

Dear Ewen Wannop,
I am an Apple IIgs owner and have recently become a member of Apple2000, and I would be very interested in joining your mailing list for the IIgs User Group. However on your Introductory Disk you say that I should contact Graham Attwood, but as he no longer appears to be on the editorial team, so I am writing to you. Could you also send me information on how to take advantage of the public domain software on the TABBS bulletin board. At present I have no experience of using a bulletin board so could you please advise me on what hardware/software I will require and where to obtain it, preferably as cheap as possible.
M J Conquest

❑ Well now, a great deal in fact to cover. I have kept your letter and replied to it here in the magazine as I felt the issues covered were worthy of a wider audience.

1) Graham Attwood did a magnificent job in promoting the IIgs for the group. I have now taken over this role. At the moment I have no plans to have a IIgs User Group as such, as I feel we are all in an Apple User Group already whichever of the many Apple machines we use. The IIgs is given coverage both within the magazine and the bulletin board. I would like to promote all Apple machines, all the way from the Apple II to the Mac II.

2) To take advantage of the software on TABBS, you must have the appropriate hardware/software to access at either 300, 1200, 2400 or 1200/75 baud. After registering for the first time, you must leave a message for the Sysop to say you are an Apple2000 member. Give your membership number and he can check the database before giving you access to the libraries. Once registered, you will be able to download files using the Xmodem protocol. Many of these files are encoded with one or other protocol. See the article on the 'Software Cache' in the June issue for further details.

3) If you send an SAE to the PO Box in Liverpool marked 'TABBS User guide', we will send you a copy of the help files from TABBS. These of course can be downloaded from the board and printed by yourself.

4) Any form of communication through the phone, whether it be to Prestel, the FORCE or a Bulletin Board, needs three things. A serial port, a modem and terminal software. The IIgs has a special serial port that is identical to that of the Macintosh and so you do not need a separate serial card. It cannot however produce the split baud rates of 1200/75 directly. Modems come in all shapes sizes and prices. The simplest and cheapest ones only have 300 and 1200/75 baud. You can only therefore use them at the slow speed of 300 baud on the IIgs. This is also true for the Mac by the way. More expensive modems use speed buffering to avoid this problem, and usually have auto dialling as well. Even more expensive are the high speed modems that have 1200/1200 and 2400/2400 baud rates. The cheaper modems are the PACE Nightingale and the Miracle Technology WS2000, these cost about £80-£100 these days. Speed buffered modems such as the PACE Linnet and Miracle Technology WS4000 cost about £120-£150. The more expensive modems such as the PACE Series 4 and Miracle Technology WS3000 start at some £150 and when fitted with the faster options can cost up to £500 or more. The best buy at the moment is the PACE Linnet 1200, which has speed buffering, auto-dial, 300, 1200/75 and 1200/1200 baud. It costs around £160-£180.

5) You will also need terminal software. Because the IIgs port is non-standard, you are limited to a handful of programs that can see it. There is a simple program 'FreeTerm' on the IIgs library disc 2SG002. This will give you simple access to most boards. However you will probably want to have more facilities than this can offer, such as an online buffer and macro capability. The IIgs programs currently available are Access II, Mousetalk, PointToPoint, TalkIsCheap and Gazelle. All the programs except for Gazelle will give you only an 80 column text screen. Gazelle in addition gives you a Super Hi Res Viewdata or Prestel screen. These packages cost from £45-£120.

Please support the advertisers in Apple2000 when you come to choose the system you decide. We have a close relationship with them that has devoloped over the years, and this relationship has become even more important now that Apple User has ceased to be. We work very much in parallel with them, and without their support, Apple2000 would not in fact exist. Many of these dealers will give a discount if you say you are an Apple2000 member.
Ewen Wannop

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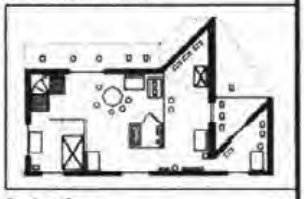

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[redacted]

Dear Sir,
I would be grateful if you would send me full details about the FORCE. If not specifically mentioned in your literature, I would like to know the following:-

1) Are all BT Gold 'Club' services available? 2) What is the relationship with PSS and is this charged extra from Sheffield? 3) Do you recommend particular modems? 4? Will Red Ryder on a Mac SE be OK for comms?
Kind regards,
David Durling

❑ Again, I have decided to publish the reply to your letter, as it covers a few points that will be of interest to others.

1) The FORCE is a closed user group on Gold. We have our own easy menu structure to help you find your way around our system, but if you leave the menu and go to the standard Gold prompt, you have all the facilities available to you that an ordinary Gold subscriber would have. These include access to Telex and the various databases. Other closed user groups systems, such as Microlink, do not offer you all these facilities.

2) If you do not have a PSS account yourself, and access the FORCE outside of London, you must pay PSS charges. These however are simply added by us to your monthly bill, so you do not have to pay them separately. The bill is itemised to show each element that you are paying for.

3) See the answer to the previous letter on this one. I would recommend the Linnet 1200 or the Series 4 or WS3000 for use with the Macintosh. These are all Hayes compatible and so will autodial from Macintosh terminal programs.

4) Red Ryder is fine as a terminal program on the Mac, and is available from the Macintosh library here at Apple2000. You might also consider Microphone or MacTerminal. To access Prestel, you will need Vicom for the Mac, or the Pretzel DA which is available for free downloading on the TABBS bulletin board.
Ewen Wannop

[redacted]

Dear Sir,
I have now had my Apple IIgs for 18 months, and have decided that I would like to investigate the Apple Programmers Workshop 'C' compiler. Cardiff Apple Centre's list of Apple manuals does not mention the APW series, so I am writing to you in the hope that you might have some information.

From the Apple IIgs 'norm', I assume that I would need to purchase the following :-

1. APW system 2. APW 'C' compiler 3. APW manual 4. APW 'C' manual

Perhaps you could tell me where I can obtain the above, and also the prices?

Also could you recommend a book that fully explains the 'Double-Hires' graphics on the IIe/IIgs. I do not have any of the IIe manuals, as I upgraded straight from a II+ to the IIgs.
M D Street

❑ The Apple Programmers Workshop is only available in this country from the Apple Developers Group. This group was set up as the official source of all developers material in the UK. However to purchase material from them, you must first become a member of the ADG, this will cost you £25 for one years subscription.

ADG
Rosebank House
Broughton Road
Edinburgh EH7 4LE
✆ 031-557-5719

To use 'C' you will need the following:

1) Apple IIgs Programmer's Workshop (APW) v1.0
ADG061S £76.25
2) Apple IIgs Programmer's Workshop (C) Compiler v1.0
ADG071S £50.00

All the required manuals are in these packages, and the APW shell also includes the 85C16 assembler. However you might also find that you require:

3) Apple IIgs Toolbox Reference Volume 1 ADG056B £23.95
4) Apple IIgs Toolbox Reference Volume 2 ADG057B £23.95
5) Apple IIgs ProDOS 16 Reference ADG029B £26.95
6) Apple IIgs Hardware Reference ADG052B £22.45
7) Apple IIgs Firmware Reference ADG025B £22.45
8) Programmer's Introduction to the IIgs ADG053B £28.75

The Hardware reference has a full description of 'Double-Hires' graphics and also has a full a description of the IIgs Super Hires graphics as well as other hardware details.
The Boffin

[redacted]

Dear Irene,
Thank you for forwarding a copy of the April issue of the magazine..

I am the owner of an Apple IIgs and am completely new to the Apple/Macintosh computers.

There are several things I do not understand and perhaps someone in the Group can help me on those matters.

1) Can you run software written for the Macintosh on the Apple IIgs? 2) How can I find out where my nearest Apple/Mac Dealer or Agent is? 3) As no software was included when I purchased the computer, I fairly urgently require the following, a) Word processor, b) Spread Sheet, c) Data Base, d) Accountancy, e) Form design. I do not wish to pay too much for the above software. I noticed in the April issue that MGA Microsystems are offering a TRIO disks which would be ideal for a. b. & c. requirement. The price is about right. how good is the system? 4) Is it possible to copy my present MS.DOS such as SAGE Accountant, Wordstar, Calcstar, Reportstar, Datastar, Mailmerge/Spellstar etc.

This would save a considerable amount but would also help me to transfer all the masses of data that I am holding.

My two Apple disk drives are 5.25 however I shall soon purchase a 3.5 drive.

Thank you for you help.
John H Sibb

❑ Welcome to the IIgs fraternity, you now own a machine that is

second only to the Macintosh. However in answer to your first question, the IIgs does not use the same microprocessor chip as the Macintosh so you will be unable to run software from the one machine on the other. In fact this is true across the wide range of computers, and so you cannot run any software designed for one system on another. This is also true of MS-DOS programs from your IBM or clone. The only exception to this rule is if you fit a co-processor card in your IIgs, this will make the machine look like another machine to the software. See the reviews of the PC Transporter in this issue for further details on how to run MS-DOS programs on the II series. This card will run all the programs you mention. Look in the pages of Apple2000 for the nearest dealer to you. Alternatively give Apple UK a ring on 0442-60244 and ask them. I would suggest AppleWorks as the ideal Word Processor/Database/Spreadsheet, but perhaps someone out there knows more about TRIO than we do? There are also programs such as OMNIS and MACPUTER which might suit you. You will certainly need at least one 3.5 disk drive in your IIgs, and you should expand your extended memory card to 1meg if you have not already done so. Many programs simply will not run unless there is sufficient memory in the machine.

Ewen Wannop

PIRATE SOFTWARE

Well, not exactly: more like 'Software from Pirate Country'... Romney Marsh, (the land of Dr. Syn, the fabled pirate turned smuggler), this is the location for an Apple II products bonanza. MGA SoftCat is offering all its Apple II stock at reduced prices during a one-day sale at Appledore. Many second-user items are available and all other Apple II products in stock will be available for purchase at discounted prices (typically 30% off).

So, if you want to pick up some bargains, come on down to Kent on Saturday 27th August (Bank Holiday Weekend), in fact why not make a day of it with the family? There's plenty to do round here, and we can provide a copy of "Romney Marsh Guide: The complete guide to the land of Syn", free of charge to all enquirors, (cover price £1.00).

Local attractions include: Romney, Hythe & Dymchurch Light Railway; Phillipine Village Craft Centre; sea fishing; Port Lympne Zoo Park with mansion & gardens; Romney Marsh Garden Centre; Windsurfing at Lydd WaterSports Centre; 10 different swimming beaches; Kent & East Sussex Steam Railway; coarse angling on the Royal Military Canal; Day Trips to the Continent; Dunrobin Shire Horse Stud; Lympne Castle; Phoenix Amusement Park; 17 famous Romney Marsh Churches; and more... (all detailed in the free guide).

We will be providing free refreshments (Appledore cider, lemonade and Kentish Apples). For Apple II enthusiasts from further afield, full details of b&b, guest house, pub & hotel accomodation is given in the guide. Everything we've got in stock will be reduced, so even if you live quite far off, it will almost certainly be worth a visit. (seven local caravan/camping sites could make for a lovely weekend in Kent with your family).
You might even go home with a second II just for the kids... No more machine time conflict! Free gamepack to all visitors...

Telephone now for a current list of second-user items as well as the Marsh guide and trip-planning map. E.&O.E.

MGA SoftCat
PEAR TREE, APPLEDORE, KENT TN26 2AR
0233-83571

[redacted]

Dear Sir,
Welcome to your new job. It will be nice to have a more Apple II face on things. Dave Ward, whose help and articles, I find invaluable, mentioned a problem (in Apple2000 June 88) about entering Control-V's into an AppleWriter text file. It is possible. There is a file called CONTROLV on the AppleWriter System Disk. Place the cursor in your file at the position you want it and load the file. You could even create a glossary entry to do this, ie.:

v[L]/A/CONTROLV]

([L] means Control-L)
(/A/CONTROLV is the name of the file to load)
(the square Right Bracket at the end, simulates a Carriage Rtn)

With this glossary entry installed, typing OPEN-APPLE v, will do the job. The only problem then is that the filename at the right side of the Status line is changed. Writing a glossary as a standard text file is an excellent way of doing it, especially for more complex ones, as you have full editing capabilities. I only use the [G]? Glossary input "on the fly". Did you know that you can use a lot of the WPL commands in glossaries? You can't use Variables or call Subroutines, however you can execute commands like the Control-L above.

Here are the basic rules :- Normal letters and figures are entered as text. Control Characters by themselves are Executed. Control Characters bracketed by Control-V's are embedded.
Yours sincerely,

Jeremy Quinn.

[redacted]

Dear Editors,
AppleWriter II Glossaries form an integral part of the application I have developed on my IIe, so mention of them in the June issue of Apple2000 (Hotline News) immediately caught my attention.

Building glossaries with [G]? and saving with [Q]F can be rather tedious, and while it is frequently a useful method of adding the odd definition or two, I invariably construct and edit a glossary by the Louis Baker method, viz. as a text file.

There is a file on the AppleWriter II boot disk which contains nothing more than a [V] which can be loaded whenever one is needed in a text file. This tedious and requires disk activity unless one is working in a ramdisk environment. Fortunately, there is a very satisfactory alternative which is to use AppleWriter's "find and replace" facility.

To do this, select a convenient letter or symbol which will not appear anywhere in the glossary. Let us assume an asterisk will do. Construct the glossary as a text file, but put * wherever [V] is required. Finally, go to one end of the file with [B] or [E] and use [F]/*/[V]/A to convert every asterisk to a Control-V. While we are on the subject, the same mechanism will work for most control characters, but not [@] null, [H] left-arrow, [M] return, [U] right-arrow, or [delete] to my knowledge. One can find a return by using the symbol appropriate to certain

816/Paint

Baudville's latest creativity tool reviewed by Mick Knapp

816/Paint consists of a series of programs which run across the range of Apple // machines except for the //+. This review concentrates on the programs' capabilities when run in colour on the //GS, but the manual states that all the programs are similar. Although not fully tested, a brief look at 816 running in double hi-res and standard hi-res on the Apple //e did indicate that the interface was identical to the super hires programs for the GS.

Two ProDOS floppies are supplied, one 5.25" and one 3.5", together with a 50 page manual. The manual is very clear and provides a good tutorial which allows a user to start using the program straight away. The 3.5" disc boots to reveal the //GS program launcher, and the selection window shows five application folders, four offering different resolutions of 816 and one giving access to a range of file utilities. This is a useful option to include on the disc as it allows good management of the data created with 816. Disc formatting, copying and deleting of files is fairly standard, but the utilities also allow some reformat options for picture files such as conversion from Double Hi-res to Super Hi-res or vice versa. Some care has to be taken in palette choices due to the dithering technique used by the GS to generate its 4096 colours in 640 mode.

Double clicking on the file PAINT.640.SUPER boots that section of the program, and a very high resolution paint screen is opened, together with a toolbox of brush types, colour selections and painting tools. The painting tools include the usual freeform drawing, straight line, rectangle (open and filled) and circle/ellipse (open and filled, but also include some excellent and fairly unique curve generating tools. Lassoing and dragging is allowed, and a paintpot and spraycan are provided.

Before we go any further I have to admit that I am not a great fan of "painting" programs in general. I do not like the pixel editing technique provided by most of the programs in this category; mostly they merely follow Bill Atkinsons' Fatbits idea and I find that this can be confusing. 816 Paint has a novel variation on this which does make the program more usable, and I will come onto this as I describe construction of a particular drawing.

The drawing I wanted to do to test out the program was fairly simple, and chosen really because I happened to have a 3.5" floppy disc on the desk in front of me. I chose this because it was a simple shape with some variety of colour, text on the label, and it contained lines, fillets, circles and fills.

I started by picking the rectangle tool and pulling a rectangle roughly in the proportions of the disc. I say roughly because, as is common with draw programs, there is no measuring facility. I then used the magnifying tool to window in on one corner of the rectangle. The screen splits in two to show the object in normal view on the left and the zoomed portion on the right. The level of zoom can be selected and changed at any time during the zoomed operations, and all of the tools are valid in the zoomed window. Hence I was able to use the arc tool to modify the corner of the disc to give it a fillet. This was done by clicking and pulling a straight line across the corner; releasing the mouse button allows the curve to float free as the mouse is moved, and when a suitable curve is displayed a mouse click secures it in place.

The zoomed window can be pulled around the main area so it is not necessary to de-zoom to construct the other four corners. Pixel editing removed the excess lines around the corners, and a chamfer was put on one corner. The zoom feature is one of the best I have ever seen in this type of program, and it is available in all four versions of the software.

The rest of the detail of the disc was drawn using the same method of editing lines and rectangles, and the disc was copied to the clipboard and pasted back, then flipped about the vertical axis to produce a back view. This operation was virtually instantaneous, but showed up the weakness of editing pixel based graphics. I wanted to remove some of the lines used on the representation of the front of the disc, but the only way was to pixel edit out the unwanted elements in zoom mode. This can be a little frustrating but the excellent zoom feature of 816 Paint does help.

I completed the picture by filling in the different areas on the disc (label, metal slider etc.) in different colours using the paintpot tool. The colours and patterns used to fill areas can be edited, and the palettes can be set

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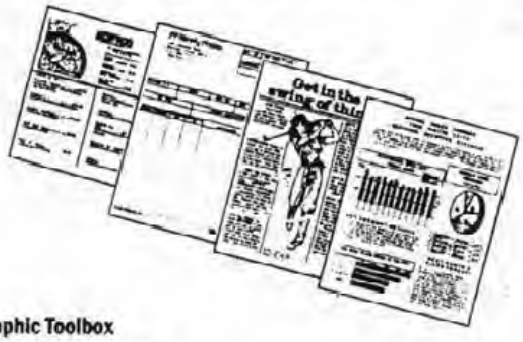

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MGA *Microsystems*
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(0233) 83571

in rotation to produce pseudo animation effects.

I wanted to put text on the label but experienced some difficulty in reading certain font/size combinations. Six fonts are provided with accompanying size and style boxes, and the text can be coloured. The program does indicate which point sizes will look best by highlighting these in the size menu, and it rescales to provide "odd" sizes. On the //e and //c the size and style menus disappear as rescaling is disabled. I finally settled on 8 point Venice to complete my Nashua disc.

As well as editing palettes and patterns, some of the actual drawing tools are definable. The option menu allows you to select a brush shape and edit it. A brush editing window with an eight by eight zoomed grid on the left and a normal size view on the right. The zoomed pixels can be turned on or off by clicking on them, and when the desired brush shape is achieved it is loaded into the main tools menu by clicking OK.

Some tools are provided which I did not make use of but would be valuable if the program was used in anger. In the palette editor, there is a spread command which allows a smooth blend of colours to be applied across a picture palette. This is used in the demonstration pictures provided with the software to show smooth colour transitions which give light and shadow efects. A mirror facility allows reflection of the painting about vertical, horizontal or diagonal axes, and the centre of symmetry can be moved to any position in the drawing.

Printer and interface support is very extensive. Some 14 printers and 29 interfaces are supported including the GS printer port. The results on my FX-80 were not particularly exciting, but then it's not a particularly exciting printer. The program does support colour printing on the Imagewriter and allows the printing of selected areas of the picture.

Summary

If I did not already possess a paint program that I am very happy with I would go out and buy 816Paint tomorrow. The program is fast in operation and contains some unique features. Patterns and colours can be edited, as can the brush shapes. The interface is easy to learn and the program fully exploits the colour and speed of the GS. If you are looking for a painting tool which is not object orientated this would be a suitable addition to your program library.

816/Paint is published by Baudville, and is distributed in the UK by MGA Microsystems at £65.00 including VAT (for mail orders, add £2.00 P&P).

Letters continued from Page 9
delimiters, but AppleWriter's [F] command seems blind to others. I can ease the burden of replacement with [H] and [U], but just how does a body go about detecting them with AppleWriter when it is they which need replacing?
Yours sincerely.
Jim Harle

❑ Thanks Jeremy and Jim, this kind of response to articles and problems, is the most valuable that you as members can provide. Articles on your favourite subject would come next! You all may be able to contribute something sometime, please get it down on paper/disc, as you think of it, and send it to us. **Ed**

[redacted]

Dear Ed.,
I joined Apple2000 in May, and am most impressed with the magazine, the Apple Slices newsletters, and the various "bits and pieces" that I have received. Before hearing about you, I was seriously starting to believe that I was perhaps the last user in a sea of IBM look-alikes !

I obtained a IIgs last year, to update my existing system of two //c's and a //e.I use Apple Pascal for all my work, and, at the time, was still using the old 64K version. To use the IIgs effectively however, it was obvious that I needed the 128K edition. Tracking one down proved a major task, with several "Approved Apple distributors" telling me that there was no such thing. In the process, I was introduced to MGA Microsystems, and through them discovered the existence of Apple2000.

I may Apple Slices, you suggest that the Apple // community is made up for the most part of enthusiasts and hobbyists. I suppose this is true, if there are people still playing with the old 48K machines (I started myself back in the year dot with the ITT 2020). However, I think the //c and //e are still perfectly adequate to meet the demands of much professional work, although clearly they are impractical for the more serious "number crunching" jobs.

Before obtaining the IIgs, I had an old "SAGE" 68000 which I obtained in the Stone Age, when it was the last word in "super-micros". It operated in UCSD-Pascal and so was reasonably compatible with the Apples. I chose the IIgs because it gives a "number crunching" performance almost as good as the older 68000-based machines and it allows me to continue using the UCSD Pascal software library that I have developed for the //c and //e over the last five years, and which amounts to some 300 discs of data.

My system is used for professional scientific programming/mathematical modelling work. This entails the production of "tailor-made" programs, often to solve a "one-off" problem, the solution of which will be published in a report of, say, 20 to 100 pages. For this work, I find the Apple Pascal system ideal; the Pascal language can be used to solve the problem and produce data lists, whilst the UCSD Text Editor allows these data to be easily incorporated into final reports. I have tried using word processors, but find them unsatisfactory, primarily because I have become so used to the Text Editor (associated with some easy rules for formatting and a simple text printing program) as a superior sort of typewriter. Similarly, I have used "data base" software, like AppleWorks and Omnis, but, as a programmer, find it much easier and more flexible to produce specific Pascal-based data crunching programs.

The complete IIgs system (not including the //c and //e existing equipment) cost £3500. I would have thought that only the more superior sort of "hobbyist" would part with that number of notes !

You may be interested in how I use this system for really quite large technical analysis applications. Obviously, the IIgs, especially running the p-System interpreter, is very slow, compared to, say, an IBM machine with a Turbo Pascal compiler. However, the answers to most of life's problems can wait a few days, and I solve the problem of speed simply by running the IIgs overnight and at week-ends. Apart from speed, memory is the other important question. This is approached in the following manner :-

The first consideration is the basic IIgs configuration. The system I use has the following memory stores :-

a) 3.5 inch drive : this contains the whole Pascal operating system, plus ample space for back-up files. b) twin 5.25 inch drives : these are used to interface to the //c and //e; they are also useful as "dump volumes" during large data processing tasks. c) 20 SC hard disc : really, all the back-up store you should ever need for anything. d) 512K RAM : this "RAM Disc" is very important, as detailed below :-

The machine configuration has a considerable influence on the second consideration, which is the efficient use of the Apple Pascal ability to divide large programs into smaller, separably compilable "Units". Using the "Non-Resident" compilation option, these Units are only brought into main memory when required. Now, a large application might swap Units in and out of memory many thousands of times, so the only practical place for them to live is on the RAM disc. Since this "disc" holds 512K and the Pascal system addresses 128K of main memory, then, effectively, one has a 640K system. Units (and data) which need not be accessed at high speed can be stored elsewhere in the system (on the 20 SC for instance), and hence one has the potential for an enormous program/data size! Actually, there is a practical limit, because Units must be stored in "libraries", and only a certain number of libraries can be accessed from a single program. However, you could "chain" programs .....

I have tried alternatives to the Apple Pascal system, but have found none so reliable, (five years of use and no faults) well-documented (1000 pages in a jumbo file for the 128K edition) or easy to use. The main disadvantage is speed - if a compiler of the p-System interpreted code were available, (like the compilers available for interpreted BASIC) then I would certainly add one to the system.

Finally, I do not have a modem attached to any of my Apples, primarily because there has been no-one to talk to. Could you produce an article on suitable mo-

dems, and perhaps suggest a software communications standard for Apple2000 use?
John Marks

❑ First of all thank you John for such an interesting case history. John's plea for a communications standard for Apple2000 is a tricky one. At the actual data level, Text files are a standard, and the FORCE and TABBS provided a means of information exchange using text. However to give advice on which software and which hardware depends on too many factors. There is the Mac, the II series, the IIgs, Pascal, CPM, Dos 3.3 and ProDOS, all need different software and hardware combinations. I have written a few articles in Apple2000 over the years, and will continue to answer specific problems as they occur, but as the whole subject is too large for discussion here, I think I need to leave it at that for the moment.
Ewen Wannop

[illegible]

Dear Editor,
Please will you try to get someone to give a loud shout to the 'comms people' to get their act together.

Why can't non-technical people like me get a program or a ROM or something which knows its own host, rings the number I give it, looks down the phone line at the other person's machine, or ROM, tells them that there are some files ready to be sent, no receiving their acceptance, assesses the quality of the line and sends the files off at an appropriate speed.

I don't want to have to become a communications engineer, I want to be able to throw away my Apple Access Reference Manual and let the machine do all the dirty work.

Of course the micro twitchers will not agree. They are never so happy as when they can twiddle away setting things up, but that they may be because they are not interested in communicating, only in communications.

I have waited seven years so far, so by the time they make it even as efficient as the telephone, *I* shall be in terminal mode !
Yours sincerely,
Peter Arnold
(no relation as far as I know ...)

PS There follows the text of a letter sent to 'AMSTRAD PROFESSIONAL COMPUTING'

Dear Sir,
There seems to be an unwritten rule in the hype type of non-communication one reads in the journals, even your's, that the punter's letters should look as if they are written by a technical sub-editor. Crafty old Sugar probably gives a good deal of 'help' to those which are at first sight seem to be for 'User Groups'. Of course Amstrad even run their own 'captive' 'User Group', but it is possible for the punters to run their own group and publish their own magazine. 'Apple2000', the National Apple User Group is one such, whereas 'Apple User' was NOT.

It seems a healthy sign that 'Apple2000', a voluntarily run independent group, prospers and 'Apple User', published by Database, has died. I know of no evidence which could connect the two, indeed I discovered 'Apple2000' (or 'BASUG', as they were called then) advertised and referred to in the pages of 'Apple User'. My point is that Amstrad owners *ought* to be able to run a fully independent user group, and publish their own magazine, and perhaps like Apple owners, for £25 a year, *less* than is charged for membership of the AMSTRAD PROFESSIONAL USER CLUB, which certainly does not seem to have much independence from big brother.

Surely it is fundamentally in everyone's interest, certainly in Amstrad's, that an independent Amstrad users club should exist and be free to offer opinions about hard and software from people who are not in the pay of the traders. This means that Amstrad owners would have to discover a group of people with almost as much experience, dedication and enthusiasm as the Apple2000 team, and persuade them to do hundreds of hours of voluntary work. Incidentally, though I have the same name as two of their team, I don't know either of them, and hasten to add that I am strictly a *user* of Amstrads and Apples, and know practically nothing about what goes on under the bonnet. Are *all* Amstrad users computer semi-literates like me? I hope not.
Yours faithfully,
Peter Arnold

❑ Thank you for your letters, you have really thrown the gauntlet down at my feet. TABBS our Bulletin Board *is very much* about communicating, try it ...

I wish life were as simple for me that I could do as you ask. With so many different host systems out there in the wide world, all different, you must have some settings to twiddle at some point in the program or you would get nowhere fast. The software writers, try to make life as simple as we can, with macros and things. Sometimes we get it right and make it easy, sometimes we don't.

What you ask for in a simple do-everything communications system, does exist at a price. At the moment only the Mac supports delayed remote dial up, as far as I know. **Ewen Wannop**

Beagle Bros Inc.
6215 Ferris Square
Suite 100
San Diego
California 92121

To: Jon Gurr
MGA Microsystems
Pear Tree
Appledore
Kent TN26 2AR
Dear Jon,
The review looks pretty accurate except for a few minor details that probably only I would be concerned with.

He seems to think that when you are in a TimeOut application, you are no longer in AppleWorks. He couldn't be any further from the truth. Unlike Pinpoint, which actually swaps AppleWorks out to disk, TimeOut applications load in with AppleWorks (very similar to switching between AppleWorks applications such as the word processor and spreadsheet).

Pinpoint is not interrupt-driven as PBI's Jeeves is.

He keeps calling TimeOut Graph "SuperGraph". He might have been confusing it with SuperFonts.

Sincerely,
Alan L Bird

This letter was passed on to us by Peter Davis who wrote the original review. **Ed**

Hotline News

Dave Ward reports on recent events from the Hotline

Dave Ward - Mondays to Fridays 1900-2100 Hours

Many users of ProDOS have felt that there is something missing even though, in many ways, it is far better an operating system than good old DOS3.3. Under DOS3.3 Applesoft users could quite easily initialise (Format) data diskettes even from within a running program. That is the facility that was found missing when they moved up to ProDOS and for a long time the only answer was to keep a store of preformatted data diskettes ready. A number of utilities have, over the years, become available but none seemed to be ideal. Fortunately Glen Bredon has produced a package "PROCOMMAND" which contains a plethora of ProDOS utilities that include a diskette formatting command that works with both 3.5" and 5.25" drives. At the expense of 2048 bytes (2K) an extra command FORMAT is added to ProDOS and that command can be executed from within a running Applesoft program. New versions can be obtained direct from Glen Bredon at the address below for $25+$5 for foreign shipping. Bredon does not accept credit cards, by the way.

Professor Glen E Bredon
521 State Road.
Princeton,
NJ 08540 USA.

It is best to obtain a genuine latest copy since a very early version contained a most peculiar bug that only allowed the utility to format diskettes that were already formatted!!

The response to two items in the June Hotline news has been enormous. First the creation of Applewriter][glossaries using the Applewriter][editor itself. We thought that it might not be possible but Jeremy Quinn and Jim Harle both contacted me with methods of accomplishing this feat and both have taken the trouble to set out their methods in letters to the Editor which are printed in this issue.

The second item regarding programs for dental records etc. elicited a letter from Harvey Nyman who took the trouble to do an 'online search' and found references to 8 American systems. Unfortunately this magazine is too small to contain a copy of his letter! If this information will be of interest to you please contact me and I'll provide you with further information.

Richard Kelly kindly 'phoned me to say that he uses a British system on his enhanced Apple // e from ATTAR computing Ltd. Newlands Road, Leigh, Lancashire, WN7 4HN. Telephone 0942-608844.

William Watson kindly informs me that the only desk-top publishing program for the Apple][plus computer that he is aware of is the Newsroom program which is available from MGA Microsystems who regularly advertise in this magazine.

On some occasions AppleWorks formatting routine will not format 5.25" diskettes claiming that the disk cannot be found. If this is the case the way round the 'bug' is to open the drive door to fool the program into thinking it has found a completely unformatted diskette. As soon as Formatting... appears on the screen close the drive door. The problem appears to occur where a diskette has been corrupted in some way - it has happened to a few members including myself. I checked this out with many diskettes and have found that the problem arises with partially formatted diskettes and ones that have been partially erased with magnets.

GS Tips Section

Print Shop Surprises

Here's a nice one for Print Shop GS users. At the main menu hold down the open apple key then exit program with ether the mouse or the Return key this will get you into La La Land.

Print Shop has some surprises for Apple II users as well. The Print Shop Companion has two of them. On the boot side at the main menu type STEVEN then press escape to turn everything upside down you can reverse this situation by doing the same thing again. Try booting the reverse side of the disk, when you get a message saying the disc is unbootable, type Ctrl-6 to play a maze game.

Apple IIGS Tips

When you see the rolling apple on the screen. That is when you try to boot without a disk in a drive hold down Ctrl open apple option keys then press N to see a list of names.

When you want to change the display in the control panel get into the desk accessories press the down arrow key then the Return key press the down arrow key then the Return key change one of your settings then press Return key this will bring you back to the control panel try hitting the Esc instead of using the down arrow keys to Quit then press return twice to get back to the program you were running. This has saved you six key presses.

When running some Prodos 16 programs you will get a file menu box for loading or saving files try double clicking on a folder instead of the OPEN box to open the folder. To close the folder try a single click on the Prodos path name at the top of the box this will close the folder.

Double clicking on the file you want to open will work as well. The only boxes you should need are DISK and CANCEL.

On my IIGS I have had the new roms fitted, when I do a system test that is option open apple Ctrl Reset at the end of

the test I get a rising note scale and a beep instead of the usual beep on its own.

Perhaps this is why Apple needed to change the roms.

Here's a tip for Basic programers to change the cursor to any keyboard Character

```
10 PRINT CHR$(30);"*" : REM CURSOR = *
```

Or with the Basic prompt press Ctrl Shift 6 then the character you want the cursor to change to press Return and there you have it. To change back use the Delete key for the cursor.

Another tip. To change the screen text and background colours Here's a small program.

```
10  SA = 49186 : REM Screen Address
20  BA = 49204 : REM Border Address
30  SV = PEEK (SA) : REM Screen Value
40  BV = PEEK (BA) : REM Border Value
50  HV = INT  (BV / 16) : REM Hardware
    Value
60  TC = INT  (SV / 16) : REM Text
    Colour
70  BC = SV - (TC * 16) : REM Back-
    ground Colour
80  POKE SA,(1 * 16 + BC)
90  PRINT CHR$ (7) ;: POKE SA,SV
100 POKE BA,1
110 POKE CHR$ (7);:POKE BA,HV * 16 + BV
```

This program will change your text to red beep reset the text it will then change your border to red beep and reset the border. Both the background colour and the text colour are contained at location 49186.

To get the text colour divide by 16 subtract this value from the total will give you the background colour. The border colour along with other system values are contained at location 49204. The reason for the beep is the screen changes to fast and you would not see the results. If you make a mistake in typing and you have no screen just press RESET to restore your colours from the control panel.

Listed below are the colour values to change in line numbers 80 and 100 for a different colour.

```
0 Black          8 Brown
1 Deep Red       9 Orange
2 Dark Blue     10 Light Gray
3 Purple        11 Pink
4 Dark Green    12 Green
5 Dark Gray     13 Yellow
6 Medium Blue   14 Aquamarine
7 Light Blue    15 White
```

Les Roberts

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ALGOL-60

Dave Miller continues with the second of a three part series on Algol

In this instalment I shall continue from the last instalment and discuss ALGOL-60 in more detail (if you have not read last month's instalment then I suggest that you read it before reading on).

Keywords in ALGOL-60 are marked by enclosing them in single quotation marks (called "primes") so as to enable the compiler to distinguish between keywords and variable names. The compiler ignores spaces so it is possible to place spaces inside variable names and still write valid code.

ALGOL-60 demands that all variables (and procedures, for that matter), be defined before they are used. There are only three types of variable supported: integer, real and Boolean. A Boolean variable has only the values 'true' or 'false'. ALGOL-60 allows arrays of any of the three types. Note that ALGOL-60 does not have character (or string) variables. ALGOL-60 passes strings via integer arrays with ASCII values placed in each element representing each character.

Literal strings, (i.e. string values such as "string"), are not delimited by the double quote, as in BASIC, but are delimited using one of two symbols:
some versions delimit string values with braces:

(string)

while others delimit values with parentheses in primes (the most common):

'('string')'

In this article the former method will be used.

ALGOL-60 strings are made doubly difficult in that the compiler ignores blanks in the code. To include spaces in strings one of two methods has to be adopted: one is to indicate spaces by the inclusion of a special space character - ALGOL-60 uses either "%" or "_". What if you want to include "%" or "_" in the text string as well? Don't ask! It's too complicated.

The other solution is to use ALGOL-60's special editing characters. Three editing characters can be included in text strings:

p	feeds a new page (or clears the VDU screen)
c	issues a carriage return and line feed
s	includes a space

Editing characters can be preceded by an optional repeat count and are enclosed in string delimiters.

An example of using editing characters is:

```
{Test{s}space{4c}Four_CRs{2pc}2_new_pages_and_CR}
```

The provided variable types are often augmented by non-standard variable types offered by ALGOL-60 compilers. The most common addition is character variables.

ALGOL-60 Statements

ALGOL-60 has the following type of statements:

1 The definition statement.

This is used to define variables. It has the following forms:

```
'integer'       int1, int2, int3, int4, int5;
'real'          r1;
'Boolean'       bool1, bool2;
'integer''array' vector [1: 10];
'real''array'   matrix [-10: 10, -10: 10]
```

The last two statements define a one-dimensional integer array dimensioned from 1 to 10 and a two-dimensional real array with indices ranging from [-10, -10] to [10, 10].

ALGOL-60 allows initial values of variables to be specified:

```
'integer' int1 := 1, int2 := 2, int3 := 3;
'real'    r1 := 3.2;
'Boolean' flag := 'false'
```

2 The simple statement.

There are six different simple statements:

❑ The assignment statement.

This assigns values to variables. Note that the symbol ":=" is used for this purpose. The symbol "=" is used only when comparing two values for equality. To emphasize the difference between the two symbols the former is usually read as "becomes" and the latter is usually read as "is equal to".

E.g:

```
a := 2.3;
n := 2;
f := 'false'
```

Some unusual assignments are possible:

```
a := b := c := d := e := 0;
```

The above assignment assigns zero to the variables "a", "b", "c", "d" and "e".

❑ The GOTO statement.

A label is used to mark the destination location, e.g:

```
'goto' dest;
....
dest: n := 4 + i
```

❑ The IF statement.

This allows code to be executed conditionally. An optional 'else' construct can be added. IF statements can be nested (see the statement labelled "IFstmt3"):

```
IFstmt1:
   'if' a = 1 'then' 1 := 2;
IFstmt2:
   'if' a = 3 'then' n := 1 'else' n := 2;
IFstmt3:
   'if' a = 4 'and' b = 2 'then'
      1 := 200
   else' 'if' a > 4 'or' c = 0 'then'
      1 := 19
```

A special form of IF statement, called a conditional expression, is available.

Examine the following IF statement which sets "b" to 2 if "a" equals 1 or sets "b" to 3 otherwise:

```
'if' a = 1 'then'
   b := 2
else'
   b := 3
```

This can be rewritten as follows:

```
b := 'if' a = 1 'then' 2 'else' 3
```

This has the benefit of allowing the compiler to produce more efficient machine code. ☛

❑ The FOR statement.

This is the main form of looping construct. It has three forms:

```
FORstmt1:
   'for' i := 1 'step' 1 'until' 10 'do' a [i]
                := 0;
FORstmt2:
      'for' i := 1, 2, 3, 4, 5, 6, 7, 8,9, 10 'do'
                a [i] := 0;
FORstmt3:
      'for' i := 1 'while' i <= 10 'do'
      'begin'
         a [i] := 0;
         i := i + 1
      'end'
```

All of the above for statements achieve exactly the same as the following BASIC FOR loop:

```
10 FOR I = 1 TO 10: A% (I) = 0: NEXT
```

FOR statements can be combined into some very powerful constructs:

```
FORstmt1and3merged:
      'for' i := start, ind [i] 'while' ind [i]
            <> 0 'and' i <= maxlen 'do'
      'begin'
         something;
         somethingelse
      'end'
```

The above FOR statement steps along the array "ind", starting at the element indicated by "start" until either a zero element is reached or element "maxlen" is accessed.

❑ The procedure call.

ALGOL-60 calls procedures simply by placing the procedure's name in the code as if it were a language command:

```
'if' a = 1 'then'
   proc a is 1
'else'
   proc a is not 1
```

The above IF statement calls "proc a is 1" if "a" be 1 and calls "proc a is not 1" if "a" is not 1 (note the spaces in the procedure names!).

Parameters are placed in parentheses and separated by commas:

```
   proc (1, 2, val1, val2)
```

ALGOL-60 supports two methods of giving parameters to procedures: call by value and call be reference. In the former, the procedure is given a variable's value only (a 'value parameter') and in the latter the procedure is given not the variable's value but its address (a 'reference parameter'). The upshot of this is that while the contents of both value and reference parameters can be examined, only reference parameters can have their values changed. This is because procedures do not know where a value parameter is placed in memory- only its value is passed.

The usual method adopted by compilers is that the addresses of reference parameters are passed directly but value parameters are copied into temporary variables and the temporary variables' addresses are passed to the procedure.

ALGOL-60 assumes that all parameters be reference unless they are explicitly made value by the following statement:

```
'value' parameter;
```

Functions are called by placing them in expressions (in the following examples "func" is a function):

```
a := func (param);
'if' func (param) = value 'then' dosomething
```

❑ The comment statement.

Comment statements allow explanatory text to be placed in the code. Comments are totally ignored by the compiler and do not affect the machine code produced:

```
'comment' this is a comment;
```

3 The compound statement.

This allows several individual statements to be regarded as one. This is necessary because constructs like 'for' and 'if' only apply to one statement. Refer to the FOR statement labelled "FORstmt3" opposite.

4 The block.

Blocks are compound statements with local variable definitions. The local variables are defined only when the block is being executed. Before and after the block is executed, these variables do not exist.

ALGOL-60 Program Structure

The structure of ALGOL-60 is surprisingly simple. An ALGOL-60 program consists of a main block, which is equivalent to the main program, in which is defined all the procedures called, the statements executed and the variables used.

Like many other features of ALGOL-60, this definition is recursive because each individual procedure can be considered a main block. Thus procedures can be declared inside procedures just like block statements can be declared inside other block statements. These "inner" procedures are accessible only the procedure in which they are defined.

ALGOL-60 does not place any limit to this "nesting" (as it is called) although each individual compiler will have some physical limitation.

For example:

```
'program' noddy;
'comment' noddy program;
'begin'
   'integer' value;

   procedure' calculate (a, b, c, result);
   'comment' procedure to perform some simple
             calculation;
   'value' a, b, c;
   'integer' a, b, c, result;
   'comment' parameters "a", "b" and "c" are
             value (nothing is returned) but
             "result" is reference (a value is
             returned);
   'begin'

      'integer' 'procedure' times (mplicand,
                mplier);
      'comment' nested integer procedure
                (function) to multiply numbers -
                this is local to procedure
                "calculate";
      'value' mplicand, mplier;
      'integer' mplicand, mplier;

      'begin'
         'integer' count, sum := 0;
         'for' count := 1 'step' 1 'until'
               mplier 'do' sum := sum +
               mplicand;
         times := sum
      'end' times;
      'comment' this is the code of procedure
                "calculate";
      result := times (a, b) + c
   'end' calculate;
'comment' this is the main program;
```

```
    calculate (2, 3, 4, value);
    print (value, 5, 0)
'end' noddy
```

Note that the recursive nature of ALGOL-60 means that the structure of the main program and of any of its procedures is essentially identical except that the main program is headed by 'program' and a procedure is headed by 'procedure'. On many implementations of ALGOL-60 no program heading is given.

Functions are provided by procedures which return a value. Note that the type of result is indicated by prefixing the keyword 'procedure' with the type of the result.

Summing up

ALGOL-60 was the first structured language and, as a result, is an important development in language design.

The language does, though, have many weaknesses: the limited number of variable types (especially no character variables), the absence of any standard method for text input and output and no file handling worth mentioning are the most glaring. ALGOL-60 also lacks the power of FORTRAN's huge set of standard mathematical functions although later versions were designed to work with FORTRAN routines.

ALGOL-60 has never been very common because of the above short-comings and also because the early compilers were generally very inefficient: they took a long time to produce poor machine code. Although modern ALGOL-60 compilers are much more efficient than their predecessors, ALGOL has largely been replaced by newer languages which offer more facilities.

As an academic exercise in language development ALGOL-60 was a great success but as a practical and applicable language ALGOL-60 was a bit of a failure!

ALGOL-60 does live on in the guise of CORAL-66. This language is almost identical to ALGOL-60, (being developed from it), but has some of the missing features added. It is used as a real-time language for mainly defence applications. But this, too, is soon to disappear: CORAL-66 is due to be replaced by Ada in the near future.

In the next instalment I shall complete the ALGOL story by discussing ALGOL-68: called by some 'The best computer language developed to date'.

Example program:

The following ALGOL-60 program asks the user to type in a series of integer numbers and then writes them out after they have been sorted into ascending numerical order.

```
'program' numbersort;
'comment' this program reads in a series of
          numbers, sorts them and then outputs the
          sorted numbers;

'begin'
  'integer' number;
  'procedure' readvalues (sortlist, number);
  'comment' this procedure reads in the set of
            numbers to be sorted;
  'value' number;
  'integer''array' sortlist;
  'integer'        number;
  'comment' note that array parameters are not
            redimensioned in procedures;

'begin'
  'integer' i;
  'comment' read in all values required;
  'for' i := 1 'step' 1 'until' number 'do'
  'begin'
    writetext ([Enter_value_to_be_sorted:_]);
    sortlist [i] := read
  'end'
'end' readvalues;

'procedure' sortvalues (sortlist, number);
'comment' this subroutine performs the
          Bubble sort;

'value' number;
'integer''array' sortlist;
'integer'        number;

'begin'
  Boolean' sorted := 'false';
  'integer' i, maxnumbers;
  'comment' "sorted" is initialised with the
            value false;

  maxnumbers := number - 1;

  'comment' loop until the Boolean variable
            "sorted" becomes true indicating
            that the array is sorted- note the
            use of the FOR statement:
            the assignment to "maxnumbers" has
            to be performed to satisfy
            ALGOL-60's syntax even though, in
            this situation, it is unnecessary
            (many compilers are bright enough
            to spot this and to ignore dummy
            assignments) this construct is
            often used to perform a series of
            statements while some condition
            remains true;
  'for' maxnumbers := maxnumbers 'while'
        'not' sorted 'do'
  begin'

    'comment' assume that all be sorted;
    sorted := 'true';

    'comment' examine all the elements of
              the array in turn;
    'for' i := 1 'step' 1 'until'
          maxnumbers 'do'
    'begin'

      'comment' swap adjacent elements if the
                first be greater than the
                second;
      'if' sortlist [i] > sortlist [i + 1]
           'then'
      'begin'

        'integer' exchange;

        exchange := a [i];
        a [i] := a [i + 1];
        a [i + 1] := exchange;

        'comment' array is not yet sorted;
        sorted := 'false'

      'end'
    'end'
  'end'

'end' sortvalues;

'procedure' writevalues (sortlist, number);

'comment' this procedure writes out the
          sorted numbers;
```

```
'value' number;
'integer''array' sortlist;
'integer'        number;
'comment' note that here one would expect
          "sortlist" to be a value parameter
          (because the array is not written
          to) but ALGOL-60 does not allow
          arrays to be value parameters;

'begin'

  'integer' i, count := 0;
  'comment' count is defined as an integer
            with an initial value of 0;

  'comment' clear screen, write heading and
            feed two lines;
  writetext ({{p}The_sorted_values_are:{2c}});

  'comment' write out all the values;
  'for' i := 1 'step' 1 'until' number 'do'
  'begin'

    'comment' print 10 values per line;
    print (sortlist [i], 4, 0);

    'if' count = 10 'then'
    'begin'

      'comment' move to next line;
      newline (1);
      count := 0

    'end'
    'else'
    'begin'

      'comment' print four spaces;
      space (4);
      count := count + 1
    'end'
  'end'
'end' writevalues;

'comment' this is the main program;

'comment' clear the screen;
paperthrow (1);

readnumber:
  'comment' ask for the number of values;
  writetext ({How_many_values_are_to_be_sorted?});
  number := read;

  'comment' only allow for a number >1;
  'if' number < 1 'then'
  'begin'

    writetext
        ({Please_type_in_a_number_greater_than_1});
    newline (1);
    'comment' this is an example of how to use the
              GOTO statement - it is not an
              advocation of using GOTO's
              generally!;
    goto readnumber

  'end';

  'comment' define the array and then read in
            the values, sort them and then
            output the sorted values;
  'begin'

    'integer''array' sortlist [1: number];

    readvalues (sortlist, number);
    sortvalues (sortlist, number);
    writevalues (sortlist, number)
  'end'

'end' numbersort
```

Dave Miller

The Boffin answers more II problems

Q. I cannot get Werdna to work properly on my GS, can you help me get it going?
A. The Werdna 4th Scenario does not work on the IIGS unless you set the column width to 40 on the display panel. The IIGS sets to 80 columns automatically and this causes the problem. However you still will have an error message when quitting. Has anyone further ideas on this?

Q. I am running out of usable slots on my IIGS and so tried putting my Disk Drives into Slot 2. This did not work at first and so I tried Slot 1. Although it seemed to be reading the disks all I got was an I/O error ....
A. Remember that the IIGS runs at 2.75 Mhz flat out. All the disc operating systems require careful timing routines to read and write the drives correctly. Putting a disk drive card in any slot other than Slot 6 will simply run the routines too fast. You will need to slow the system speed down to make it work. The reason that Slot 6 can run at full speed, is that it is seen as an extension of the Smartport. It expects disc drives to be in that Slot whether it is set to Disk Port or to Your Card. The timing is adjusted to slow the slot down in either of these modes, and it then reads and writes the discs correctly.

Q. After I have initialised a /RAM drive from the Finder and copied system files onto it, I cannot boot from it, nothing happens at all. What should I be doing to make it work?
A. For a /RAM drive to be bootable, block zero must contain the boot code that is found on a normal ProDOS disc. Some disc initialising programs, including the Finder, will not write this code. A 'quick and dirty' solution is to copy block zero from any bootable disc using a sector editor such as Block Warden or Bag of Tricks. The more elegant solution is to initialise with the utility disc that came with your /RAM card.

Q. I have acquired an old Apple II+ with an external UHF modulator. As hard as I try, I cannot get a colour picture on my TV set.
A. All the II series computers have a phono video line socket giving composite video output. However this output varies from one machine to another between PAL (European) and NTSC (USA) colour. On a TV set designed for the UK you can only display PAL colour. You would need a dual standard or American TV to display NTSC. The old II+, the //c and the IIgs all give NTSC video. The //e gives either PAL or NTSC depending on whether it was assembled in Ireland or the States. The //c has an optional extra PAL colour modulator that allows colour to be output at UHF level. Beware though, there was a smaller Black and White modulator issued with the early machines.

The Boffin

plusDISK

Dave Ward reports on the fastest disk drive to come from Scotland

Cirtech who gave us the Flipper and plusRAM memory cards have now introduced plusDISK which is a battery backed memory card starting at 128K bytes and expandable to a megabyte.

The plusDISK system arrives in the usual Cirtech padded yellow box. The card, protected in an anti-static plastic envelope, is accompanied by a clear comprehensive User's manual, 3.5" and 5.25" diskettes of support software to modify AppleWorks & allows Dos3.2, Dos3.3, Pascal 1.1,Pascal 1.2, CP/M 2.20B & CP/M 2.23 to use the plusDISK card's extra memory. The 27 page A5 spiral bound manual gives comprehensive details on the installation of the plusDISK cards, how to add more memory chips and troubleshooting problems.

The card used for this review was a full one megabyte card kindly loaned, by Cirtech, to us for a few months.

Product description

The plusDISK card is a memory card using 256K bit cmos chips with a very small rechargable battery on board. The main card will accept a maximum of 512K bytes but can be expanded to a full megabyte with a 'piggy back' card. The basic card is marketed with just 128K bytes which can be expanded to 512K bytes in 64K increments. The card can be made to look like a RAM disk or a 'hard disk' by simply the positioning of a two pin link over three pins on the card. The rather small battery is claimed by Cirtech to retain the data on the card for over 2 months even if the card is removed from the computer!

The CMOS chips used on the plusDISK card are very much bigger than the normal DRAM chips on memory cards and whirling the standard 512K card, even fully populated, will fit in any slot. The plusDISK card fitted with its piggy back card is so wide that it is unlikely to fit into a slot with a card in the adjacent, higher, slot.

The plusDISK can easily be used as a hard-disk for PASCAL 1.3, Cirtech CP/M plus and Microsoft CP/M 2.20B (56K) 2.23(60K) and DOS 3.3. You can also partition the plusDISK so that ProDOS and all or some of the other three operating systems can be accessed from the same plusDISK.

The card measures, in centimetres, 23 long by 8 high and 1.3 wide for the standard card and 2.7 for the card plus piggy-back card.

Installation

The installation is relatively simple but Cirtech suggest care should be taken to prevent shorting of the battery and to remove static electricity by touching an 'earth' before handling the card. As usual this is comprehensively covered in the manual. You may place the card in any of slots 1-7 on an Apple][Plus (preferably 64K), Apple //e or Apple IIGS, however there are some exceptions which should be noted:

1. You cannot use slot 0 in an Apple][plus which is reserved for the 16K memory expansion card.

2. Slot 3 cannot be used in a European Apple //e if an 80 column card is installed in the auxiliary slot 3. You are also advised not to use slot 3 in an Apple IIGS. I tried it and could not get it to work there under any conditions in slot 3 of the Apple IIgs.

3. If you have an enhanced Apple //e it is advised that you place the card in slot 7 as it can be auto-booted from there.

4. If you are going to use Pascal 1.3 you should place the plusDISK in slots 4,5 or 6 so that Pascal 1.3 will recognise it as a Ram disk.

5. In an Apple IIGS you may place the plusDISK card in 1-7 except slot 3. For slots other than slot 7 you must enter the 'control panel' to recognise your card. You can also arrange to boot from any slot in an Apple IIGS. Slot 2 might prove a little difficult since the machine assigns drives to slot 2 after slot 5 has had its compliment of two drives. Therefore disk drives are not too welcome in slot 2. You could use slot 1 to hold your 5.25" disk][drives and then place the plusDISK in drive 6, remember that you will have to set the machine to slow processor speed to use the drives there, though.

The plusDISK card up to 512K bytes is a similar size to to plusRAM cards and will fit in any slot without baulking the slots either side. Note, however, that if you want a card fitted with the plusDISK piggy-back card you will almost certainly need to leave the next higher slot free. Therefore slot 7 in Apple][plus and Apple //e computers is a good choice for the plusDISK card with piggy-back. Unfortunately you won't be able to do this on an Apple IIgs with a plusRAM-GS card in its special slot.

Once installed it is suggested that you might like to try out the self-test program on the card. However, this can be done at any time providing that the machine is in Applesoft] prompt or monitor * prompt. The self-test erases all data from the plusDISK. The following table shows what you enter depending upon the plusDISK slot- ☛

```
SLOT APPLESOFT  MONITOR

  1  CALL 49418  C10AG
  2  CALL 49674  C20AG
  3  CALL 49930  C30AG
  4  CALL 50186  C40AG
  5  CALL 50442  C50AG
  6  CALL 50698  C60AG
  7  CALL 50954  C70AG
```

Of course you must press 'return' after entry !

As the plusDISK cards, like the plusRAM cards, are based on the new Apple standard for large memory expansion cards they should, therefore, be compatible with all future software unless Apple should move the goalposts!

The two diskettes of software produce the following listing when a CATALOG command is executed, see Figure 1.

The catalog listing above is taken from the 5.25" diskette but the one from the 3.5" diskette is much the same except for the number of blocks. Note that on the above listing there appears to be too may blocks used! This is because the 5.25" disk only has support for DOS 3.3 , CP/M and Pascal which can be read by those operating systems. It does not seem possible to do this on a 3.5" diskette, in the same way. Perhaps it might be achievable by partitioning the 3.5" diskette with HDMATE?

When you boot the diskette the following menu appears on the 40 column screen:-

```
PLUSDISK SUPPORT DISK V1.01
  P) PLUSDISK PARTITIONING
  L) APPLEWORKS DESKTOP LIMITER
  A) APPLEWORKS STARTUP ENHANCE-
     MENTS
  F) FILER
  B) BASIC
        PLEASE ENTER CHOICE
```

Let us have a look at some of these options :-

B - takes you to Applesoft BASIC.

F - is the Apple Computer Inc. Filer program to copy files etc.

A - AppleWorks is modified so that you aren't prompted during its boot-up. Since AppleWorks is already on a 'RAM card' it isn't necessary to load it into RAM even if some is found! This routine is just a trifle inflexible requiring that the volume name is /APPLEWORKS. So if you intend to use AppleWorks ensure that your plusDISK is named /APPLEWORKS.

L - Limits the amount of the plusDISK that AppleWorks can use as its desk-top (plusDISK set-up as a RAM disk, of course) so that the rest can be used for files etc.

P - Partitioning.

Like the Flipper and plusRAM extra cards the plusDISK allows one to partition the memory on the card into separate areas for use by different operating systems. The plusDISK method of partitioning is different than that used by the other two cards and is, I suspect, similar if not the same as the method used by their HDMATE software package for partitioning hard disks.

First the plusDISK must be ProDOS formatted. You can then boot one of the plusDISK support diskettes and when the main menu appears choose the P option for partitioning when the following menu appears :-

```
PLUSDISK PARTITIONING PROGRAM V1.01
  PLUSDISK IN SLOT 7 IS SETUP AS
  FOLLOWS :-
  TOTAL SIZE          = 2048 BLOCKS
  LARGEST FREE SPACE  = 473 BLOCKS
       PRODOS = 1248
       PASCAL = 0
       CP/M   = 400
       DOS    = 200

DO YOU WISH TO <C>REATE OR <R>EMOVE
AN AREA, '0' TO QUIT
```

In the above you will notice that the PASCAL area is assigned no space. On choosing the <C>REATE option you will be asked how much space you wish to assign to PASCAL 1.3.

Like HDMATE the partitioning program cordons off areas of the ProDOS formatted disk which appear as ProDOS SYStem files. To choose a particular system you just execute that file. This is a very friendly and effective way of partitioning the disk.

See Figure 2 for a CATALOG listing of plusDISK with all three areas.

From the Applesoft prompt] you just type -CPM to enter the CP/M system. Cirtech also supply a menu program - notice the PLUSDISK.SYSTEM in the above CATALOG listing - which lets you choose one of the three areas. For more a complicated set-up you could use ProSel to move between applications. For instance I created a plusDISK with AppleWorks in a directory, thirty other ProDOS utilities and the DOS, CP/M & PASCAL work areas. Moving from PASCAL to AppleWorks took just 3 seconds!

The first time you try to activate an area such as CP/M it will not boot and you will requested to place a CP/M start-up diskette into a suitable drive. When you have done this and

Figure 1

```
/PLUSDISK
NAME            TYPE  BLOCKS  MODIFIED         CREATED          ENDFILE SUBTYPE

PRODOS           SYS      30  18-SEP-84  0:00  <NO DATE >         14848
BASIC.SYSTEM     SYS      21  18-JUN-84  0:00  <NO DATE >         10240
PLUSTART         BAS       9  14-DEC-87 18:21  <NO DATE >          3678
PLUS.O           BIN       5  21-JAN-88  0:00  <NO DATE >          1794 A=$4600
PLUSDISK.SYSTEM  SYS       3  21-DEC-87 13:14  <NO DATE >           798
FILER            SYS      51  18-JUN-84  0:00  <NO DATE >         25600
STARTUP          BAS       3  15-JAN-88  0:00  <NO DATE >           616
LIMITER          BAS       6  15-JAN-88  0:00  <NO DATE >          2095
LIMIT.O          BIN       1   8-JAN-88  0:00  <NO DATE >           300 A=$1800
ASTART           BAS       6  16-JUN-86  0:00  <NO DATE >          2491

BLOCKS FREE:     2        BLOCKS USED:  278      TOTAL BLOCKS:  280
```

Figure 2

```
/RAM7
NAME            TYPE  BLOCKS  MODIFIED         CREATED          ENDFILE SUBTYPE

PRODOS           SYS      30  18-SEP-84  0:00  <NO DATE >         14848
PLUSDISK.SYSTEM  SYS       3  21-DEC-87 13:14  <NO DATE >           798
DOS              SYS       1  <NO DATE >       <NO DATE >           512
CPM              SYS       1  <NO DATE >       <NO DATE >           512
PASCAL           SYS       1  <NO DATE >       <NO DATE >           512

BLOCKS FREE:  474        BLOCKS USED: 1574      TOTAL BLOCKS: 2048
```

the diskette has booted just place your plusDISK support diskette (5.25" only) into the drive. If you take a DIRectory of this diskette you will find that there is a utility PLUSDISK.COM and if you execute this your plusDISK partition will be formatted so that you can save files there and even boot-up the system.

Setting up areas for DOS and PASCAL 1.3 is just as simple.

Unlike the Flipper and plusRAM extra card the plusDISK does not have a special back-up system probably because its not so important and one can't have everything. If you ever need to back-up the whole plusDISK this can be done with RAM disk back-up programs such as the one on the Beagle Bros. BIG U disk or from ProSel, even if the plusDISK is partitioned. Using this technique you can even back-up plusDISK formatted for, say, CP/M only by first formatting in ProDOS then making the largest partition possible.

Ram vs Hard

Most users will want to set-up the card as a pseudo 'hard disk' to quickly load such programs as AppleWorks on boot-up. If you make a large enough 'disk' you could keep many of your applications and choose them with a program selector such as ProSel. For Apple IIgs users a card configured as a hard-disk should have at least 768K, preferably more, and will startup ProDOS 16 applications in about 15 seconds. Set as a hard-disk AppleWorks will be unable to use the 'RAM' as its desk-top.

Business users may prefer to use the plusDISK to contain their data files to speed-up access; I know users who set-up plusDISK to hold data files under ProDOS and DOS 3.3 with great effect. If you use plusDISK to hold data files, please do remember that if you don't back-up your data regularly to some other media you may wish you had!! The plusDISK is just like any other disk in that its data can be corrupted.

To allow AppleWorks to use the plusDISK as a desk-top you must use the RAM-disk set-up. Unfortunately you don't gain much by having the AppleWorks desk-top on plusDISK since the next time you use AppleWorks it simply erases the old desk-top!! Another way would be to have a small plusDISK (192K is minimum) to contain the AppleWorks program and a RAM card in another slot to hold the AppleWorks desk-top.

Conclusion

The plusDISK card performed perfectly whilst I was testing it. During that period my machines went down quite a few times but the data on the plusDISK remained intact. The card was removed from the Apple IIgs computer and transferred to various other Apple // computers and worked perfectly each time. I found, Cirtech's claim that the data would remain intact for at least two months even when the card was not in a machine, a little surprising in view of the small battery and the massive 1 megabyte of memory on board. I managed to leave the card, which had only had thirty-six hours in a computer, in its box for 14 weeks, on replacing it in an Apple IIgs ProSel was up and running in a second or so!!

The plusDISK works very well on an Apple IIgs computer and can be transferred even to an Apple II plus providing the programs are compatible with both machines

If history repeats itself then the future for plusDISK type of cards is very bright, indeed. When Cirtech introduced its Flipper 1 megabyte card in 1985 an Apple-type memory card became affordable by most users. Since then the plusRAM cards have been introduced which are less expensive still. In general chips will get smaller have higher capacity and use less power as evidenced by the introduction recently of the Cirtech plusRAM 16 card. If the cmos chips used on the plusDISK follow the same route we could well be using high capacity battery backed RAM cards not too far away in the future instead of hard disk drives. Perhaps this might extend to a 'hard disk' box, contain many megabytes of cmos memory, that can be daisy-chained to a smart port or scuzzy device! **Dave Ward**

info

Product : plusDISK 128K
Maker. Cirtech (UK) Ltd.
Available from :
Cirtech (UK) Limited
Currie Road Industrial Estate
Galashiels
Selkirkshire TD1 2BP
✆ (0896) 57790
Price : £128.00 + VAT
Value :
Performance :
Documentation :

info

Product : memory pack 64K
Maker. Cirtech (UK) Ltd.
Available from :
Cirtech (UK) Limited
Currie Road Industrial Estate
Galashiels
Selkirkshire TD1 2BP
✆ (0896) 57790
Price : £16.00 + VAT
Value :
Performance :

info

Product : plusDISK piggyback board 64K
Available from :
Cirtech (UK) Limited
Currie Road Industrial Estate
Galashiels
Selkirkshire TD1 2BP
✆ (0896) 57790
Price : £88.00 + VAT
Value :
Performance :

The IIgs library

We view the launch of a revised disk catalog

We have begun a re-appraisal of all the Apple II libraries.

Firstly there is a legacy from our early days of a large number of 5.25 discs. Many of these discs are still of relevance, but most are now superceded by better things. We shall be sorting these out and in due course will publish a Catalog of their contents. Next the Special Release library will also be examined, and some discs may well be removed from there as well.

In the meantime, we have started with the IIgs library. When the IIgs appeared, a new library was started for this machine. However there was very little material to draw on at that time, and so the library was mainly composed of demonstration discs. We have decided to start this library afresh now that we have more suitable material to include in it. To start with there is a nucleus of 7 discs, and their contents and reference numbers are listed on the next two pages.

We shall also be reworking the introductory disc, and in due course a new one will be released in the introductory pack. In the meantime any orders you have for discs in the existing Apple II library may be ordered using the reference numbers in the current library Catalog on the back of the introductory disk. Use the order form issued with Apple Slices. We hope to have details of the Special Release library in the next issue of Apple2000.

PLEASE NOTE many of the programs on the IIgs library discs are Shareware. If you decide to use these programs, after an initial investigation, please honour any payments asked for by the authors. We only pass on such material on this understanding.
You must do this youself directly to the author, Apple2000 are not able to do it for you.

Apple II library	£4.00 each £32.00 for 10 £60.00 for 20
IIgs library	£5.00 each £40.00 for 10 £75.00 for 20

THE IIgs LIBRARY

Disk Ref: 2GS001
Desk accessories

Name	Type	Blocks
MOUSE	NDA	19
PANEL.NDA	DIR	1
MINITERM	CDA	8
DUMPIT.DA	CDA	8
IW.DA	CDA	11
PRINTSCREEN	CDA	3
NIFTY.LIST	DIR	1
COLOUR.CDA	CDA	1
MASTER.CDA	DIR	1
PANICNDA	NDA	20
PUNC.NDA	NDA	5
RULER	NDA	14
CONFUCIUSN	NDA	25
FUNPAK	DIR	2
CALENDAR.DA	CDA	6
CONTROLNDA	NDA	39
RAT.CALC.DA	CDA	17
TYPEIT.DA	CDA	8
NOTEPAD.DA	CDA	11
HDB.DA	CDA	6
TYPEWRTR.DA	CDA	4
CLOCK	DIR	1
NDA	DIR	1
Blocks used:	935	

Disk Ref: 2GS002
Comms software and utilities

Name	Type	Blocks
TALKISCHEAP	DIR	1
KERMIT.STUFF	DIR	2
FREETERM.GS	DIR	1
BINARY.II	DIR	1
SQUEEZE.STUFF	DIR	1
DOS3.3.INSTALL	DIR	1
LIBRARIAN	DIR	1
DIVERSICOPY.SYS	DIR	2
Blocks used:	975	

Disk Ref: 2GS003
General Utilities

Name	Type	Blocks
THEICONEDITOR	DIR	1
INCONOGRAPHER	DIR	1
TAPEDECK	DIR	1
WAKEUP	DIR	1
CASSETTE	S16	25
BOOT.SLOT.6	SYS	1
TEX	DIR	1
DHR.FIX	DIR	1
DISK.LABELS	DIR	1
P8CDA.SYSTEM	DIR	1
VIEWER	BAS	6
COPYII82.DOC	TXT	11
II.GIF.VIEWER	DIR	1
RX.PROTECT	DIR	1
SHRCONVERT	DIR	1
RAMDRIVE	DIR	1
SOUND.STUDIO	DIR	1
WAYSTATION	DIR	1
EVENT.EDITOR	DIR	1
CABLE.REF	TXT	8
FINDER.FIXER	DIR	1
MACDOWN	DIR	1
DEARC	DIR	1
PROPACKER	DIR	1
PBH.PACKER	DIR	1
SHOWFILE	DIR	1
FREEWRITER	DIR	1
BOUNCE.DEMO	DIR	1
MULTICOLOR	S16	6
TUF	S16	8
TEXTDSPY	S16	12
DISPLAY	DIR	1
MACPAINT.GS	DIR	1
MAC.TRANS.GS	BAS	15
Blocks used:	1469	

Disk Ref: 2GS004
Startup programs and Games

Name	Type	Blocks
STARTUP.PROGS	DIR	2
MUSIC	DIR	1
ECP8	DIR	1
BOUNCE.IT	S16	156
OTHELLO	DIR	1
COLOR.MIND	S16	52
Blocks used:	798	

Disk Ref: 2GS005
Fonts

Name	Type	Blocks
AACHEN.BOLD.12	$C8	8
ANDOVER.12	$C8	4
APL.12	$C8	7
ART.DECO.9-48	$C8	111
ASCII.12	$C8	12
ATHENS.18	$C8	11
BABYLON.18	$C8	5
BABYLON.9	$C8	3
BELLEVUE.6	$C8	4
BELLEVUE.8	$C8	5
BODONI.12	$C8	8
BODONI.BLDIT.12	$C8	8
BODONI.BOLD.12	$C8	8
BOISE.18	$C8	17
BOSTONII.9-24	$C8	87

BROADWAY.24	$C8	16
BROADWAY.E.18	$C8	14
BRUSH.SCRIPT.12	$C8	8
CAIRO.18	$C8	13
CAIRO.36	$C8	42
CALIGRA.18	$C8	16
CAMELOT.18	$C8	15
CAPE.CANAV.12	$C8	8
CAPE.CANAV.24	$C8	20
CARMEL.24	$C8	21
CARTA.12	$C8	16
CARTOON.12	$C8	5
COOPER.BLACK.12	$C8	1
COPENHAGEN.12	$C8	9
COPENHAGEN.18	$C8	15
COPENHAGEN.24	$C8	25
COPENHAGEN.9	$C8	7
CUPERTINO.12	$C8	9
CUPERTINO.24	$C8	27
CURSIVE.12	$C8	8
CURSIVE.24	$C8	21
CYRILLIC.12	$C8	7
DALLAS.12	$C8	9
DALLAS.18	$C8	15
DALLAS.24	$C8	28
FLORENCE.12	$C8	1
FUTURE.12	$C8	6
FUTURE.18	$C8	8
FUTURE.24	$C8	13
FUTURE.9	$C8	5
GALLIARD.12	$C8	8
GARAMOND.10-24	$C8	54
GENMATH.9-24	$C8	69
GREENBAY.18	$C8	14
HAM.14	$C8	11
HOLLYWOOD.12	$C8	10
HOLLYWOOD.18	$C8	16
HOLLYWOOD.24	$C8	27
HOOD.RIVER.12	$C8	6
IMAGE.8	$C8	4
IMAGEHI.7	$C8	4
KAWASAKI.14	$C8	14
KEYMAP.12	$C8	10
LAS.VEGAS.12	$C8	8
LAS.VEGAS.24	$C8	18
LINEAL.18	$C8	11
LIVERPOOL.18	$C8	11
LONDON.18	$C8	8
LONDON.36	$C8	22
LONG.ISLAND.12	$C8	8
LONG.ISLAND.18	$C8	15
LOS.ANGELES.12	$C8	6
LOS.ANGELES.24	$C8	14
MANHATTAN.12	$C8	10
MANHATTAN.24	$C8	29
MATH.12	$C8	8
MATH.24	$C8	22
MICROBOSTON.12	$C8	4
MICROBOSTON.24	$C8	7
MINIBOSTON.12	$C8	7
MINIBOSTON.24	$C8	14
MOBILE.18	$C8	17
MONTREAL.12	$C8	9
MONTREAL.18	$C8	19
MONTREAL.24	$C8	26
MONTREAL.9	$C8	7
MOS.EISLEY.12	$C8	8
MOS.EISLEY.24	$C8	21
MOSCOW.12	$C8	7
MUSIC.10	$C8	9
MUSIC.14	$C8	9
MUSIC.18	$C8	9
MUSIC.9	$C8	9
OBLIQE.12	$C8	8
OBLIQE.18	$C8	12
OPHIR.12	$C8	9
OPHIR.24	$C8	24
OPTIMA.10-24	$C8	52
PALO.ALTO.12	$C8	7
PALO.ALTO.24	$C8	18
PARIS.12	$C8	10
PARIS.18	$C8	20
PARIS.24	$C8	27
PARIS.9	$C8	8
PHILLY.9-24	$C8	59
Blocks used:	1597	

Disk Ref: 2GS006
Fonts

Name	Type	Blocks
PARK.AVENUE.18	$C8	6
PICA.10	$C8	5
PRINCETON.10-24	$C8	45
RANGERS.18	$C8	12
RAVENNA.12	$C8	9
RAVENNA.24	$C8	24
REGENCYSCRIP.12	$C8	5
REGENCYSCRIP.14	$C8	7
REGENCYSCRIP.18	$C8	10
REGENCYSCRIP.24	$C8	14
ROME.18	$C8	17
RUSSIAN.12	$C8	7
SAIGON.12	$C8	9
SAIGON.18	$C8	15
SAIGON.24	$C8	24
SAN.DIEGO.24	$C8	20
SAN.FRAN.18	$C8	7
SANTIAGO.12	$C8	8
SCAN.48	$C8	31
SEATTLE.10	$C8	6
SEATTLE.20	$C8	14
SHASTON.16	$C8	12
SILICON.VAL.12	$C8	5
SOUVENIR.10	$C8	6
SOUVENIR.12-24	$C8	38
SPOKANE.18	$C8	13
STENCIL.12	$C8	6
STENCIL.24	$C8	12
STUTTGART.9-24	$C8	52
SUNNYVALE.12	$C8	8
SUNNYVALE.24	$C8	20
SYDNEY.12	$C8	9
SYDNEY.24	$C8	26
TALIESIN.18	$C8	17
TINY.12	$C8	5
TINY.6	$C8	4
TOKYO.14	$C8	11
TORONTO.9-24	$C8	54
VECTORS.12	$C8	10
VECTORS.9	$C8	7
VENICE.12	$C8	7
VENICE.14	$C8	9
VENICE.24	$C8	18
WARTBURG.18	$C8	8
WARTBURG.36	$C8	23
WASHINGTON.12	$C8	9
WASHINGTON.18	$C8	23
WASHINGTON.24	$C8	23
WASHINGTON.9	$C8	8
WOODSTOCK.12	$C8	8

Name	Type	Blocks
AVANT.GARDE.10	$C8	7
AVANT.GARDE.12	$C8	8
AVANT.GARDE.14	$C8	9
AVANT.GARDE.18	$C8	13
AVANT.GARDE.24	$C8	20
BOOKMAN.10-24	$C8	56
CHICAGO.12	$C8	7
COURIER.9-24	$C8	51
GENEVA.9-24	$C8	68
HELVETICA.9-24	$C8	55
MONACO.9	$C8	5
N.HELVETICA.10	$C8	6
N.HELVETICA.12	$C8	7
N.HELVETICA.14	$C8	8
N.HELVETICA.18	$C8	11
N.HELVETICA.24	$C8	17
NEW.CENTURY.10	$C8	7
NEW.CENTURY.12	$C8	8
NEW.CENTURY.14	$C8	10
NEW.CENTURY.18	$C8	14
NEW.CENTURY.24	$C8	19
NEW.YORK.9-36	$C8	98
PALATINO.10-24	$C8	56
SYMBOL.12	$C8	8
SYMBOL.18	$C8	13
SYMBOL.24	$C8	20
SYMBOL.9	$C8	6
TIMES.9-24	$C8	56
ZAPF.CHANCE.10	$C8	6
ZAPF.CHANCE.12	$C8	8
ZAPF.CHANCE.14	$C8	9
ZAPF.CHANCE.18	$C8	12
ZAPF.CHANCE.24	$C8	18
ZAPF.DINGBTS.10	$C8	7
ZAPF.DINGBTS.12	$C8	9
ZAPF.DINGBTS.14	$C8	10
ZAPF.DINGBTS.18	$C8	15
ZAPF.DINGBTS.24	$C8	24
Blocks Free:	40	

Disk Ref: 2GS007
General utilities and Da's

Name	Type	Blocks
A.....A	DIR	1
A...BIG.RED...A	DIR	1
A...COMPUTER..A	DIR	1
A.....CLUB....A	DIR	1
A.....A	DIR	1
A.423.NORFOLK.A	DIR	1
A.NORFOLK.NE..A	DIR	1
A....68701....A	DIR	1
A.....A	DIR	1
A.VOLUME.GS03.A	DIR	1
A....MISC.....A	DIR	1
A.....A	DIR	1
MAC	DIR	1
CDA	DIR	1
NDA	DIR	1
DEMOS	DIR	1
SUPER.HIGH.RES	DIR	2
BINARY.II	DIR	1
READ.ME.FIRST	TXT	16
TEX.V2.01	SYS	24
Blocks used:	908	

All disks are supplied on 3.5 inch format.
The fonts may be used with any ProDOS 16 program that uses loadable fonts. Simply place in the FONT folder for use, but remember that the more fonts you load, the longer the program will take to get started. The fonts are also useable with Timeout SuperFonts.
Most programs have document files with them, DA's should be placed in DESK.ACCS.

Living with a SCSI Hard Disc

Confessions of a memory junkie

by Ewen Wannop

My first Apple II came with 16K of Ram and two free upgrades to give it a vast 48K of usable memory. I loaded programs into the machine from cassette tape. Many years, disc drives and Ram cards later, I have a 1.25 meg IIgs with an additional 1 meg Ramcard, two 3.5 inch 800k drives and two of my original 5.25 inch drives.

It would seem that this vast increase in memory and storage would be enough for anyone, after all, the Macintosh fraternity mostly only have 1 meg Ram and a couple of 3.5 drives to use. But, when I find time after doing all the other things I seem to get involved in, I write software, and am working at present with the APW assembler and the full bells and whistles of the GS toolbox environment. The system files you need to have online take up more than 1 meg, or two discs. You need a further disc for your source files, and also a disc for your destination code. This would mean having four 3.5 discs on line at all times. A simpler way is to use the 1 meg or larger Ram drives with the additional benefit of fast access. But, and it is a big BUT, you need to load the Ram card every time you power down. It takes some 10 minutes to get going, and it effectively stops you just dipping in and trying out a change in those odd moments that might be available.

The obvious solution for me, and the one recommended by Apple, was to get a hard disc and store the whole working environment and the source files onto the one drive. However, this raised some questions in my mind. I knew that Apple had their own SCSI card and drive for the II, but the various offers for much cheaper drives from other suppliers seemed very attractive. These were mainly advertised for the Macintosh, and so I had no idea whether they would work with the II or not. I only knew vaguely that SCSI was supposed to be compatible with any SCSI port, but surely I thought, the formatting of a drive for the Macintosh would make it unusable with the IIgs? How was I to use one of these drives if no formatting disc suitable for use with the II was available. Also, I knew that ProDOS could only see 32 megabyte, so what size drive should I get? Finally, a jungle of different cables were offered, which did I need, and did I need terminators as well?

I don't think it is deliberate, but there does seem to be a conspiracy of confusion surrounding hard drives and how to connect them. Finally I decided on the Apple 20SC drive, and I did choose the right cables, and it did all work first time, so I now give I hope the definitive guide to SCSI drives on the Apple II. I also hope I can clear up any mystery surrounding the subject and bring the joys of mass storage to all.

ProDOS

There are still some DOS 3.3 aficionados out there, but most of us have now moved to the ProDOS environment. To use a hard drive under DOS 3.3 you will need to use one of the older dedicated non-SCSI hard drives. These drives do not usually support ProDOS, but will support Pascal and CPM.

ProDOS can only see a volume with a maximum size of 32 megabytes, there is no way round this problem as only two bytes were allocated for the block size of a volume! We cannot use any more than 32 meg regardless of the size of the disc, at least we cannot see any more as one single volume.

ProDOS has some limitations in the way it can see drives. Except for Slot 5, it can only see two drives in any one Slot. If you put the SCSI card in Slot 5, it will map the first two drives into Slot 5 and a further two drives into Slot 2. If you are using a IIgs you will probably have other disc devices in Slot 5 to start with.

Only ProDOS can see the SCSI card in an Apple II, and use it transparently as it would any other storage device such as a disc drive or Ram card.

If you must use DOS 3.3, try using the program DOS33.BNY to co-exist DOS files with ProDOS. This program boots in DOS 3.3 from ProDOS and allows files to be stored in a partitioned disc. It is available on TABBS.

The SCSI card

The Macintosh has a SCSI port built in. The II series does not, and this includes the IIgs. However, a SCSI card costs around £65 and will plug into ANY Apple II machine. Once installed, you have full SCSI capability, just like the Macintosh! If you have a II+ you will need a 16K memory card in Slot 0 as well, for ProDOS to run.

Both the Macintosh and the SCSI card have a 25 way 'D' type socket to connect to the system. You may need a special cable to connect to your hard disc.

The SCSI card Rom is now at revision 'C'. Early SCSI cards had problems with the code in Rom, and it is recommended that you get hold of the new 128K revision 'C' ROM if you can. The card is otherwise identical, so it is simply a single chip swap. Your Apple dealer can arrange this for a small fee. The new 'C' ROM, apart from clearing up various 'bugs', uses the supplied disc to give partitioning capability, allowing two devices to be mapped to one slot. This allows a 60 meg drive to be partitioned as two 30 meg devices Drives 1 and 2. As hard drives are often slightly larger than advertised, you might even have two 32 meg drives available!

Cables and Terminators

The true SCSI connector is a massive 50 way thing. Apple have provided two of these on its own drives, other drives may only have

a ribbon cable with a 25 way 'D' plug at the end. If your drive will not connect directly to the port, you will need a SCSI System cable. This has a 25 way 'D' plug at one end, and a 50 way SCSI connector at the other, with a very thick cable in between.

If you have an Apple drive, or have a few drives connected, you may need a Terminator as well. These are slightly misnamed, as they go in between the cable and the drive, and allow data to pass through. I suppose they terminate the cable at the drive though. The Terminator is there to stop crosstalk problems between two drives. If you do not have an Apple drive, you will probably find that it is built in to the drive already.

If you are going to use more than one hard drive, you can daisy chain through the spare socket on the drive. If there is no spare socket, make your own daisy chain from 25 way ribbon cable, two 25 way IDC 'D' sockets and one 25 way IDC 'D' plug. It works, I have tried it! If you have more than one drive, the SCSI priority must be different for each. Give the highest number to the one you want to boot from, usually this will be set to 6. See the manual for details of how to set SCSI priority.

Using SCSI hard drives

Now the drives are connected and running, you need to format them for use with ProDOS. This could not be easier. You all have a program or utility that you use for formatting new blank discs. Just tell this program where your hard drives are, and it will format them in the same way as a floppy. The only difference is that you will get a rather larger disc available!

The actual size of disc you get will depend on various factors. The nominal size of disc may be 20 megabyte or larger, the actual size of a 20 meg drive may be anything between 19 to 21 megabytes. The drives are all made oversize, and when first initialised for use, bad sectors are marked, what is left over is what you actually get and can use. Typically 5% either way from the nominal size can be expected. If you get the chance, try out a few and choose the largest!

Backing Up your drives

It is inevitable that you get a disc crash some day. With a floppy you only lose one small disc. With a hard drive you may lose rather a great deal of data. If you received a disc of ProDOS utilities with your SCSI card or drive, you will have a backup program included. If you did not get a disc, then get hold of ProSel (see the June issue of Apple2000 for details). You should backup on a regular basis to avoid disasters.

ProSel is recommended for use with your hard drive, as it is the fastest way to find and run a program that may be one of hundreds on your drive. If you are using the IIgs and therefore ProDOS 16 files, run ProSel as the 'START' program in your System folder.

Conclusions

There is no real mystery about hard drives and the Apple II. You must have an Apple or other SCSI card. From there you can use any SCSI drive, or drives, you can get your hands on. The IIgs boots the Finder a great deal faster than by floppy, and it makes software downloading a joy never having to worry that your disc may be nearly full! **Ewen Wannop**

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The Nibbler's Corner

The Nibbler takes his monthly look at the Apple scene

We all saw with some regret that Apple User had died. Regret because there is room for more opinion and material for the Apple II series. After all the States supports at least four magazines specifically for the Apple II, and many more issued from the user groups over there. However we were given no warning of this move, and those of us like me, who still have subscriptions outstanding wonder where we stand. I for one still smart over the earlier sell off by Database of Telelink..

The other day I received the following from Database:

Dear Subscriber,

First of all let me apologise for the delay in writing to you.

As you will realise by now, for some time Apple User has not been receiving from readers or advertisers the degree of support it needs to continue publication in its current form.

We have a number of options under examination but unfortunately these are taking longer to come together than was envisgaed. However we hope to be in a position to advise you of our decision shortly.

In the meantime please be assured that you will be offred the choice of either a new publication, an existing publication or the unexpired portion of your subscription.

Yours sincerely,
Derek Meakin (Managing Editor)

No coincidnce I suppose that Database have just launched a new magazine for the Amiga ..... and all I wanted was Apple User, or something, anything, to do with Apple computers.

On another note, those of you on Prestel will not have missed I suppose the great price hike that they have forced on us this last month. When we had the Telecom Gold price hike last year, they said it was to bring it in line with Prestel. As you could use Prestel free in the evenings at that time, I suppose it was only a matter of time till they brought Prestel in line with Telecom Gold!

We used to have free access on Prestel in the evenings, Saturday afternoons and Sunday. Now we have a 'cheap rate' of 1p a minute every evening and all day Sunday. What happened to Saturday afternoon then, some of us don't watch cricket or football! I suppose that they will start to charge for just looking at a telephone soon ...

A member provoked a bit of thought at PO Box 3 the other day. He suggested that as the membership fee was the same each year as the joining fee, he should get a free introductory disk annually. He also suggested it would keep members up to date with details of the libraries and other things.

It certainly would help inform members if we sent one out annually, but we would have to put the membership fee up by a pound or two to cope with all the costs involved. The introductory disk is not exactly free, we just bear it as part of the costs in getting you all to join in the first place. Apple2000 does not make a profit, we just try and give you as much as we can for your twenty five pounds.

Finally he asked if anyone out there knew where he could get hardcopy/written material/graphics/photographs scanned and saved to disk for viewing on an Apple //e, and if possible to be able to edit and print as well. The answer of course is for him to buy a Thunderscan, but is anyone out there with one of those things prepared to help him out? Please contact:

Gordon P Owen, PO Box 45, Lewisham, SE6 3LB

I have also had a request for information on 'Apple Business Graphics'. If anyone knows of this program, what it does, and where to get it, please send us the details. We will publish it for the member concerned to see.

John Lee, our hardworking Sysop of the FORCE, is putting together the definitive User Guide to Apple Connections. How to wire a plug to connect any Apple to anything else. Most of you will know what a jungle this all is. If you have successfully connected an XYZ printer/modem/peripheral to your Apple ABC computer, send him the details of how you did it.

Lastly, we were pleased to see that the ZIP chip has finally arrived in the UK. I was beginning to wonder (as were many others) if this chip really existed at all. Dave Ward has at last managed to lay his hands on one, and he reports that his machine now really is four times faster than before, and that so far he has come across nothing that does not work with it. It even worked with his Snapshot card he reports! Dave is preparing a full report, complete with benchmarks, which we hope to bring you in the October issue. The ZIP chip is suitable for the II+, //e and the //c and is available from MGA. Ring them for current prices and availability.

The Nibbler

To reply to any of the articles in the magazine, to the letter pages or simply with information, send preferably on a disk (any form of Apple disk, it will be returned), either to:
Apple2000
PO Box 3,
Liverpool L21 8PY,
or post on Telecom Gold 84:BSG005, or leave in the Apple2000-Magazine area on the TABBS Bulletin Board

plusRAM-16

The Power to Expand

ADD ONE TO SIXTEEN MEGABYTES TO YOUR APPLE

plusRAM-16 is the newest RAMDisk card from CIRTECH, designed to let your Apple keep right on growing! **plusRAM-16** plugs into any standard slot in your Apple II+, //e or IIGS, and comes complete with one megabyte of memory ready installed. It is fully socketed to allow you to plug in extra RAM chips when you need more memory, right up to sixteen megabytes.

plusRAM-16 is a RAMDISK card which works just like an incredibly fast disk drive, to make programs operate at electronic speeds. It's like having instant access to all your data!

- **plusRAM-16** is automatically used by AppleWorks for desktop expansion. It's also supplied with lots of extra-special enhancements for AppleWorks (vers. 1.3 & 2.0 US):
  - A full function calculator which pops up instantly on the screen any time you need to use it.
  - A massive 42K print buffer which can be assigned to any printer.
  - Lets you use your AppleMouse for full cursor control and menu selection.
  - Automatic saving of large desk-top files to multiple disks.
  - Onscreen date and time display (from any ProDOS compatible clock).
  - Lets you run AppleWorks 1.3 on the II+ (with 16K language card and 80 column card).
- **plusRAM-16** uses custom logic circuits and advanced design to give high reliability and much lower power consumption in your Apple than other RAMcards.
- **plusRAM-16** is supplied with the unique **RamDesk Manager** which lets *you* control all that extra memory so you can change instantly between programs as often as you like, without having to use slow drives.
- **plusRAM-16** is supported by more software than any other RAMcard; ProDOS, Pascal 1.3 and Cirtech CP/M Plus automatically recognise plusRAM 16 and full support is included for DOS 3.3, CP/M 2.20b/2.23 and Pascal 1.1/1.2.
- **plusRAM-16** is designed to observe Apple standards to guarantee maximum compatibility.
- **plusRAM-16** is easily expandable using standard RAM chips; from one to four megabytes with one megabit chips, and up to sixteen megabytes with forthcoming four megabit chips.

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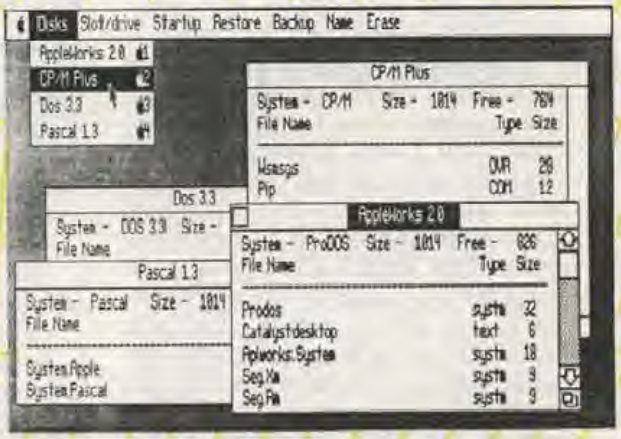

The plusRAM-16 in this example has been set up using the RAMDesk Manager to give four different RAMDisks — AppleWorks, DOS, Pascal and CP/M Plus.

The graphics RAMDesk Manager shown is for use with the enhanced 128K Apple //e and Apple IIGS. A text version is also supplied for use with other models.

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The Universal Disk Controller

Bryn Jones expands his system to use those old Macintosh disk drives

Like many Apple][users, I recently purchased a UDC (Universal Disk Controller card.) in order to run Mac. 400 & 800k drives on my][e. The original beige coloured drives nicely match the][e's colour scheme, and the 800k drives work well. (The 400k drives are dreadful.) Mind you, unlike 800k Unidisks and 'GS' drives, these units do not have a push button eject feature. Hands up all those high techies who are still poking six inch nails into that little hole to get the disk out!

Regular 'Mouse Desk' users (Are there any?) will know that this package has a soft eject feature, and I was pleased to note that this worked with the UDC as well as with the PC (Protocol Converter. Apple's 3.5 inch disk controller card.) Clearly it was possible to program the eject feature, but where would I find the information to do so. Fortunately I also use a 3.5 version][c, and the information turned up in a publication for that machine called "Apple][c Programmers Guide to the 3.5 Rom" (Apple product £A2L4037), though it may be available elsewhere too. Chapter 3, "Calls to the Protocol Converter" had all I needed.

Listing 1 shows the assembly routine used, which is based on the example program on page 46, but excludes the search routine for a slot containing a PC, which is not needed here. My routine assumes a PC in slot 7 and specifies drive 1 eject, but it is easy to modify for other slots and drives, as we shall see.

The first section calculates the "dispatch" address according to the formula: ADDR. = $CN00 + ($CNFF) + 3 where N = the slot number and ($CNFF) = the byte at that address.

The rest just calls the eject function of the PC Control' command.

Listing 2 is a BASIC routine which POKEs the machine code into page 3 and puts a simple 80 column menu on screen so that you can select drive 1 or 2 with a highlight bar and press RETURN to eject.

To make the routine refer to drive 2, you change the 'Unit' number in the daisy chain (line 32 of Listing 1) by poking it into $031B (decimal 795). If your UDC or PC is in another slot, just deduct (7-slot number) from 199 and POKE into locations $0304 (772) & $030C (780), and change the titling accordingly. The][c requires notional slot 5.

As I am using an unenhanced][e, the 80 column controls require lots of weird POKEs, but it should work on an enhanced machine too. 'ud^' is BRYNspeak' for up & down arrows. (No fancy mouse text available.)][+ users will need to revise the routine to cater for their particular 80 column screen requirements.

Of course, it would be better if is was a SYSTEM file, so that I could use it on exit from a typical application program!

Come to think of it, if I revise the routine to make it relocatable and more general, add it to an AZTEC 'C' front end, and compile it for use under ProDOS/ BASIC.SYSTEM with the SYSTEM file option...

...Oh well, back to the drawing board!

Bryn Jones

Listing 1:

```
                        1  * EJ71
                        2  *
                        3  * Soft eject for slot 7, drive 1.
                        4  *
                        5  * Uses MERLIN
                        6  *
                        7  ZPL       EQU   $0006
                        8  ZPH       EQU   $0007
                        9  CNTLCMD   EQU   $04
                       10  *
                       11           ORG   $0300
                       12  *
0300: 18                13           CLC
0301: D8                14           CLD
0302: AD FF C7          15           LDA   $C7FF
0305: 69 03             16           ADC   £$03
0307: 85 06             17           STA   ZPL          ;0+(C7FF)+3.
0309: A9 00             18           LDA   £$00
030B: 69 C7             19           ADC   £$C7
030D: 85 07             20           STA   ZPH          ;C7+carry.
030F: 18                21           CLC
0310: 20 17 03          22           JSR   DISPATCH
0313: 04                23           DFB   CNTLCMD
0314: 1A 03             24           DA    DPARMS
0316: 60                25           RTS
                       26  *
                       27  DISPATCH  EQU   *
0317: 6C 06 00         28           JMP   (ZPL)        ;Sim. JSR
                       29  *
                       30  DPARMS    EQU   *
031A: 03               31           DFB   $03          ;Count.
031B: 01               32           DFB   $01          ;Unit.
031C: 1F 03            33           DA    DIB          ;Dev.Info.Blk.
031E: 04               34           DFB   $04          ;Cntl.Cd.
                       35  *
                       36  DIB       EQU   *            ;No DIB.
031F: 00 00            37           DDB   $00
```

Listing 2 is continued on Page 37

Concise AppleWorks

Several Questions Answered by Steve Morrisby of Bidmuthin

Whether Appleworks is the world's most popular, or second most popular, software is debatable - depending mainly on whether you count unit sales, in which case Lotus 123 wins, or if you count copies in use, in which case, Appleworks wins (Appleworks not being copy protected).

There are many reasons for Applework's popularity, among them its reliability and its amazing power/ease of use ratio. One thing is for sure, and that is that Appleworks would not be the program it is without the numerous enhancements which are available, and which turn Appleworks into a program with which you can do virtually anything, easily, and without a huge hardware investment.

As well as all the third-party enhancements, Appleworks itself has improved as it has moved from version 1.0 through to the current V2.0. (The USA versions are used in the UK. Other countries, such as France and Germany, have localised versions).

Appleworks was launched at the same time as the IIc in 1983. The program itself is the work of a genius called Rupert Lissner, who based it on his own Quickfile - a simple, but fast, database; which was also parent to Appleworks' Apple III equivalent - 3E-Z Pieces.

(AppleWorks has since been parent to MicroSoft Works for the Mac).

There are two other fundaments of Appleworks: the first is the user interface or, as it is now known, the Applework's filecard interface and the second is the ProDos operating system (which was based on the Apple III operating system SOS).

The filecard system with card to show depth in a menu; menu questions selectable by cursor or initial letter; return key takes you forward, escape takes you back, came out of Apple's own research to find an improved user interface.

At the same time, Rank Xerox were doing similar research at their Palo Alto Research Centre and coming up with windows, icons, mice and pull down menus. The higher echelons at Apple decided to buy the PARC research and squeeze the interface into a 128K machine which they called Macintosh.

We now move to 1984: Appleworks (a few minor bugs and a printer bug having been rectified) is selling well, as is the 128K IIe and 128K IIc. (Thanks to Lissner's advanced use of sparseing (data compression), a 50K Appleworks spreadsheet can do more than a 200K spreadsheet on other machines.) The 128K Macintosh is launched, the 256K Apple III has improved its failure rate to 50% and the IBM PC is being bought by corporate America. The same corporate America is bemused by this new toy; the Mac; and ask the obvious question: if the operating system and program takes 127K, that does not leave a lot of room for workspace, does it? The reply is that this is an exaggeration.

The upper echelons at Apple announce that the Macintosh will stop the world falling into IBM's clutches and that the Apple II is dead. Meanwhile, at least one manager at an IBM PC manufacturing plant is using Appleworks to define the production schedules. Fortunately, not many people listen and are more concerned with the immediate requirement of being able to do more with what they have got. In particular, the requirement is for larger spreadsheets and documents and that means more memory.

So much for early history. The first enhancement, both chronologically and in order of importance, was extended memory and was, oddly enough, invented by an Apple employee. He said; let us take the 64K extended 80 column card and add another 64K. And then another, and so on.

Apple turned the idea down, but gave him permission to take the idea elsewhere. Eventually landing up at a (then) small Texan engineering company, the rest is history and we know the result today as RamWorks. Two years later, Apple introduced their own memory card and AppleWorks was modified (V1.3) to recognize that card automatically. RamWorks, is however, still far more popular, mainly because it does so much more for AppleWorks.

The enhancement and expansions that memory cards give have developed over the years and rather than trace their development, we shall leap ahead to the present day.

There are three Apple II machines which can run AppleWorks directly: //e, //c and IIGS. The II+ is a special case which will be discussed later. The Lazer machines can also run AppleWorks.

All versions of AppleWorks will run on all these machines; but version 1.x will run on the IIGS only in //e mode. To make use of the IIGS memory requires AppleWorks version 2.. Version 2 runs on all machines. Because upgrades from earlier versions to V1.3 are free; you should have this upgrade. Because the upgrade to V2.0 costs (currently) £50, but you do get a new manual, it is understandable if you don't have V2.0 (it is, however, strongly recommended).

The version of ProDos will also vary. ProDos 8 V1.4 (free upgrade from your local dealer) should be used. ProDos V1.1.1 (and earlier) won't work ☛

From Page 31
properly on the IIGS and will cause time/date problems on any machine as it only contains date info up to 31st December 1987.

Using ProDos V1.4 causes only one problem, and that is incompatibility with Cirtech's Flipper (old version). The upgrade from Cirtech to rectify this costs £20 (+VAT and postage) and provides full PlusRam compatibility.

The important memory cards, and AppleWorks enhancements are:

1) For //e

Apple Memory Card *(1Mb max)* - expands desktop, loads most, but not all, of AppleWorks program into memory.

Flipper/PlusRam *(1Mb max)* - as Apple Card plus: Auto segmentation of large desktop files onto multiple disks. 42k printer buffer. AppleMouse cursor control, time/date display with ProDos clock. Runs AppleWorks on II+. Multiple operating system capabilities.

RamFactor *(5Mb max)* - as PlusRam but no mouse control or buffer. Loads **ALL** of AppleWorks into ram. Extends AppleWorks 2 WP files to 23,000 lines. Extends database to 23,000 records. Extends WP/DB clipboard to 2048 lines/records. Auto time/date entry into database. Can disable AppleWorks autoload-to-Ram feature (for pure Ram based systems). Can allocate separate Prodos RamDisk from AppleWorks 2 (like GS Ram Disk control panel).

RamWorks *(3Mb max)* - as RamFactor but does not occupy a slot (replaces 80 col card), provides a 64k buffer for certain printer interface cards. No multiple operating syatem capability. RamDisk from software only, not control panel. AppleWorks desktop size is approx 75% of Ram size. (Due to being bank switched memory).

2)For //c

2-Ram Ultra 1, 2, & 3 *(1Mb max)* - as RamWorks

N.B. There is a new version of the //c with a //c version of the Apple Memory Card.Neither of which are available in the UK.

3)For IIGS - all occupy IIGS memory slot.

Apple IIGS Memory Card *(1Mb max)* - as Apple Memory Card for //e

PlusRam 2 *(2Mb max)* - as Apple IIGS Memory Card with PlusRams AppleWorks enhancements

PlusRam 8 *(8Mb max)* - as PlusRam 2, (Uses 1 Meg DRAMS).

GS Ram *(1.5Mb max)* - as Apple IIGS Memory Card with RamWorks/RamFactor AppleWorks enhancements. Plus disk cache.

GS Ram Plus *(8Mb max)* - as GS Ram , (Uses 1 Meg DRAMS).

NB. All GS memory cards should use CAS before RAS DRams. These are more expensive than ordinary D Rams but are much less prone to errors. The worst case is when different types are mixed.

Unfortunately, even in this case, the IIGS diagnostics disk will pass the memory as being OK).

Note: Except for the very simple (and cheap) Apple Memory card, all memory cards come with software to enhance AppleWorks. In all cases, this is a one-time modification.

To calculate the desktop size you may need, calculate 1 byte per character of data. So for a database of say 8,000 records, each averaging 150 bytes you would need a desktop of, roughly, 8,000 x 150 = 1.2 Meg. (You would also need the Database to be expanded to 8000 records or more).

However, there is a further limiting factor: one of the ways in which AppleWorks gets its speed is to use contiguous blocks of memory. It simply grabs huge chunks of memory. If it can't find enough memory to grab it will not clear out any memory; it will say "not enough room on desktop to complete this action. Please save and remove file..."; despite the memory indicator showing plenty of room. So you may have a 2 Meg file on a 4 Mb desktop and unable to add a second file of any size! This is only noticeable at large file/desktop sizes.

Another aspect of AppleWorks internal memory management which is only noticeable at large sizes is that files are larger in memory than they are on disk. This seems to be a combination of the above memory-grabbing and data compression when saving to disk.

To give an idea of how efficient AppleWorks is at memory management, we recently had to transfer a database from an IBM program to AppleWorks. The data on IBM occupied approximately 1.2 Meg on several disks. (It contained a lot of blank spaces and quotation marks as field delimiters). On AppleWorks, the same data occupied just 225k in memory, and less on disk.

OTHER HARDWARE ENHANCEMENTS

Accelerator - these speed up the processing time and work with all programs. Generally for the //e, running 3.5 times faster as the IIGS already runs 2.8 times faster.

ACCELERATORS

Titan - accelerates 1st 64k of main memory only. No longer available

Speedemon - uses a memory cache technique which can cause problems with AppleWorks. No longer available.

TransWarp - accelerates auxiliary memory as well as main and so runs approximately 20 - 30% faster than other accelerators with same clock speed. Currently the clear leader in accelerators. Available.

Zip Chip - Appears to be an attempt to make a VLSI (Very Large Scale Integration) chip of the Speedemon. Still not in production (April '88) despite being extensively advertised for 6 months. *(Ed. It has now been seen, but not this side of the pond yet!)* In theory, if it works, it could run on the //c. This would be unique.

The IIGS has its own accelerator and runs at 2.8 MHz. i.e. 2.8 times the speed of a IIe/IIc. TransWarp runs at 3.5 MHz. However the IIGS addressses all memory at this speed, while IIe/II+ extended memory is not all addressed at accelerated speeds with the accelerators.

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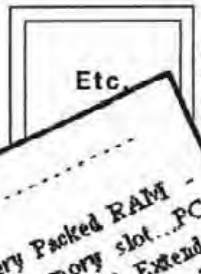

Yes, once you've drawn a few boxes you run out of great ideas. Or do you?

Based on A... hanced... tie...

STOP PRESS ..... MANY NEW IIGS ITEMS IN STOCK .....

Hardware.....Hard Dicks...Hard Disk Sharing...LaserWriter IINT connectivity...Battery Packed RAM - Main slot...Battery Packed RAM - Memory Slot...Two Memory Cards in one memory slot...PC Transporter now expands AppleWorks...Hard Disks run MS-Dos under ProDos...Keyboard Extender Cables...MousePads...RGBMonitor Extender Cables...IIGS as Colour TV Stands for ImageWriter Printers...internal modems to 1200 and even 2400 baud V21/22 and 22 bis...Midi Interface...AppleTalk sharing of ImageWriter & LaserWriters... Software.....TimeOut series in stock include: UltraMacros, MacroTools, Superfonts, QuickSpell, Graph, FileMaster, SideSpread...Coming soon...Thesaurus, PowerPack, Communications and TimeOut Accounts...Now available in stock for DeskTop Publishing: GraphicWriter II - full LaserWriter IINT, NTX support. Also Publish It. Multiscribe Version 3.0, Database includes ProFiler and DB Master Professional...Sensible Grammar...Copy II+ V8.3, handles IIGS 3.5" disks...Multiple patch disks now available for AppleWorks...New DeskWorks Accessories for ProDos 16...System Disk for IIGS (Finder) now V3.1revised...New Style Games...High graphic quality including the new CinemaWare...All IIGS Systems and configurations in stock...Educational discounts available

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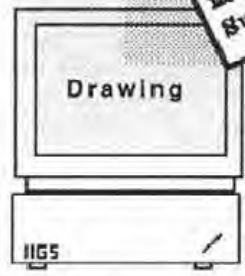

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From Page 32

DISK DRIVES - FLOPPY

Either 140k 5.25" or 800k 3.5" drives can be used. With the software enhancements now available, 800k Drives are extremely worthwhile.

Once upon a time the requirement for increased disk capacity once led to high capacity floppy drives being created. Typically these were 640k 5.25" although other sizes existed. They all worked by using a modified version of ProDos 1.x. This ProDos is no longer fully compatible with AppleWorks, so do not use the drives for AppleWorks.

There are many 5.25" drives to choose from, but do make sure you use a reliable disk controller card.

There is a more limited choice on 800k drives:

1)Apple 3.5" Drives - platinum coloured - use with IIGS. Can use with //e with Universal Disk Controller. Runs ProDos and Pascal 1.3. Available from all Apple dealers.

2) Apple Unidisk 3.5" drive - white. Do not confuse with platinum drive. Use for //c. The only 800k drive which works on the //c. Works on IIGS and works on //e with Apple 3.5" controller. **Note: Apple 3.5" drive will NOT work on //e with this controller** *(confusing isn't it)*. Apple now call this controller the UniDisk controller. Because this drive is the most expensive of all the drives you should only use it on the //c. Limited availability in the UK.

3) Lazer 3.5" Drive - platinum. Use for //e with Universal Disk Controller (UDC). Runs ProDos only. Not daisy-chainable. Much cheaper than other drives. Requires UDC to run on IIGS, so losing cost advantages. Available in UK.

Notes:

1) All data is completely compatible and disks are interchangeable between drives.

2) Drives 1 & 3 also function as external Macintosh drives.

3) Drive (1), Apple 3.5" Drives (platinum) can function as IBM 3.5" drives.

4)Universal Drive Controller controls up to 2 drives; any combination of 5.25" and 3.5" drives. Allows Apple 3.5" drives to run on //e and IIGS.

HARD DISKS

For future compatibility (particularly the forthcoming network) use SCSI drives only.

Apple HD20/HD40SC - SCSI drive. Controller card (version B) not fully debugged yet. Version C - announced but not yet released - should solve this. Drive is fine for Macintosh.

CMS SD20/40 etc.-SCSI drive. Works with //e/IIGS and Macs. Controller card allows up to 3 Apple IIs to share the same drive. Runs ProDos or Pascal 1.3. CMS controller card only controls CMS drives.

BATTERY BACKED RAMDISKS

PlusDisk (II+///e/IIGS)

A battery backed RamDisk, using Static Ram and which enables you to switch on and boot into AppleWorks fast. Will boot and load fully enhanced AppleWorks in under 5 seconds. A main slot card; so cannot give contiguous IIGS main memory. Up to 1 Meg. Very fast. Very good. Use in conjunction with extended memory card for AppleWorks expansion. Because it uses static RAM, it is a big card (especially in 1 Meg version) and will hold data for up to 2 months using its own on-board NiCad battery. This makes it suitable for maintaining data while the computer is off, and even for physically tranferring data.

RamKeeper (IIGS)

This is more of an expander and protection device, for IIGS memory slot cards only. RamKeeper fits into the memory slot and then 1 or 2 IIGS memory cards fit into RamKeeper. As well as holding the memory card, Ramkeeper is also linked to a chunky external lead/acid battery which is trickle charged from the mains.

Because RamKeeper is powering Dynamic Ram (as against Static Ram) its external battery will only maintain the Ram for about 6 hours (extra batteries can be added, of course, to form a, ahem, battery). Thus it is not suitable for physically transferring data, and should be regarded more as a protection device to preserve against accidental power outs or "brown-outs".

It also enables IIGS memory to be further expanded by using 256k DRAM chips, rather than the **much** more expensive 1 Meg DRAM chips.

Thus PlusDisk and RamKeeper do different jobs and complement rather than compete with each other.

Having listed the hardware enhancements, we now turn to the software enhancements. It is worth reiterating though that the worthwhile (memory) extensions to AppleWorks are largely software based as they modify certain AppleWorks system files. Further software enhancements ensure that memory expansion is the most useful hardware enhancement, closely followed by 800k disks.

Software enhancements to appleWorks are of 2 types -

1)those that integrate fully into AppleWorks, extends its capabilities and do not require you to quit AppleWorks to utilise them; and 2) those that require you to quit AppleWorks in order to use them.

It is easiest to talk about the second category first as that encompasses ALL ProDos programs, which can import and export data and obey the "quit" guidelines.

The quit routine is an elegant way by which you can move between ProDos programs without rebooting; and is surprisingly often ignored: -

When you quit a ProDos Program, the program calls the ProDos quit routine. You see this in its simplest (and worst) form on an isolated program (e.g. AppleWorks straight out of the box) where, when you quit, the screen asks you to enter the prefix and pathname of the next application; - a feat which I doubt if even the memory man himself could perform. *("What are the thirty-nine steps?" "The thirty-nine steps are the steps required to quit one ProDos program and enter another without re-booting or using a selector").*

A selector removes the tedium (not to say impossibility) of remembering pathnames and

enables simple point 'n' go program selection. Selectors range from the gargantuan Finder for the IIGS (takes ages to load and a lot of K) to the pure elegance of Birds Better Bye which takes precisely 0k on any II. There are a whole host in between: Mousedesk, Quark Catalyst, Apple Desktop II to name some iconic (wimp) ones, and RunRun and ProSel to name two more text based ones.

With a selector you can move freely between programs and if you have your programs in Ram then the speed is quite staggering. Unlike Multi-Finder on the Mac, Softswitch on the IIGS, and Shuttle on the //e; you always have to quit to change programs.

All ProDos programs have a quit command which goes to the quit routine and hence to the selector. Basic's quit command is] Bye.

If you are going to use more than one ProDos program, you need a selector. Definitely.

The other type of enhancement, integral with AppleWorks, is designed to made sure you never need to use any program other than AppleWorks...

The integrated enhancement to AppleWorks have generally been referred to as Desktop Accessories, and whilst this may have been a true description in the past, the enhancements now available are more accurately described as full applications which happen to be only accessible as a part of AppleWorks.

(For the benefit of any Mac users who may be reading this; while the Mac has one level of accessories - those available from the top left Apple - the IIGS has three levels. The same top left Apple as the Mac - which are only available from ProDos 16 (true GS mode; the New Desk Accessories always available under any operating system or program which doesn't disable interrupts and application specific accessories - which is that we are talking about here. The //e and //c only support application specific accessories.)

The first accessory program for AppleWorks was called Jeeves and was swiftly obsoleted by Brian Skiba's Pinpoint series. Pinpoint not only works with all versions of AppleWorks 1.1, 1.2, 1.3 and 2.0, but also works with several other programs including ProDos Basic itself and the Run Run selector, which has obvious implications. A way of phrasing this is to say its an application-specific accessory, but specific to a range of applications!

Pinpoint accessories includes calculator, notepad, calendar and appointment diary (you can use AppleWorks itself for these functions). It also includes a telephone number search and dial function (you can use AppleWorks itself to do the dialling), a remarkably useful way of addressing an envelope and a way of turning your printer into a typewriter with a one line memory. (You can "sort of" do this with AppleWorks). It's two major functions however are Graphmerge - which enables single or double hi-res graphics to be placed within AppleWorks Word Processor documents and communications. This Graphic facility was a major reason for Pinpoint's staggering success in the USA, where publishing of text/graphic documents has been a requisite of Apple II users for many years. (It is often forgotten that desk top publishing really started with the Apple II in ☛

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Open-Apple is Tom Weishaar's monthly newsletter for knowledgeable Apple II users. It's thin but packed tight with Apple II lore, humor, letters, tips, advice, and solutions to *your* problems. Compared to other Apple II publications, ***Open-Apple*** has the highest new-idea-per-issue ratio, the clearest writing, the funniest cartoons, the longest index, the best warranty (all your money back if you're not satisfied), *and* it takes up the least shelf space.

II cue #55

The Apple IIgs has a shortage of usable slots, so it's best not to waste one of the standard slots on a RAMdisk. But any RAMdisk you create in the IIgs memory expansion slot takes RAM away from the system. One solution is to get a *big* RAM card. The biggest available is Cirtech's plusRAM GS8. This card will expand to the full 8 megabytes that the IIgs supports. For more, see the April 1988 ***Open-Apple***, page 4.21.

From our fan mail:

I have started re-reading ***Open-Apple*** once more from issue No. 1, and I am once again mesmerised by the amount of information in such a small space. The more I read the more gets through to me, and if I search carefully enough, I usually find answers to my problems. In addition, it is a pleasure to read a magazine written in literate English. I am also amazed that the paper arrives so promptly each month in Israel.

L.D.Easterman
Ra'anana, Israel

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around 1980 with programs such as Print Shop, where the low quality of output was not a hindrance).

The other major facility is communications. This provides 300/300 and 1200/1200 comms (e.g. Gold, 121) within AppleWorks, both sending and receiving AppleWorks files within AppleWorks itself. There are three other Pin Point/ Appleworks enhancements: Spelling Checker and Key-Player Macros; the third is Pin Point Tool Kit and consists of eight further disk accessories geared towards the programmer who wishes to write his own desk top accessories.

The main strength of Pinpoint leads to its main deficiency which is the installation procedure. The strength of Pin Point is that it works with a number of ProDos applications and because of this, if any changes are made to either the number or memory status of any of the Pin Point accessories, the entire package needs to be reinstalled. PinPoint have now solved this to a limited extent by offering a fully configurated Pin Point plus Speller, plus Macros, for the IIGS and Appleworks Version 2 only.

This improvement was brought out in response to the new Time Out series which has solved the installment problems but only work with Appleworks Version 2. The main difference is in memory management of the two ranges. Pin Point uses RAM disk space, whilst Time Out uses desk top memory space. The upshot of this, is that a separate RAM disk installment procedure needs to be performed for PinPoint, whilst Time Out simply "hitches a ride" on whatever Appleworks' desk top expansion, is being used - whether a modification to Appleworks, such as Applied Engineering's Expander or simply relying on Appleworks known simple expansion capability.

TimeOut is officially Beagle Bros. entry into AppleWorks, but some of the programs have their origin in Software Touch programs.

Software Touch was a spin-off from Beagle Bros. which then merged back with Beagle Bros. for the creation of TimeOut. Software Touch programs include AutoWorks - macros incoporated into T.O. UltraMacros; FontWorks which was father to both T.O. SuperFonts and T.O. SideSpread.

Time Out currently consists of eight programs and it is very interesting how they all work both independently and together within Appleworks.

Time Out can be best regarded as the memory manager and organiser for the Time Out applications themselves. A way of looking at this is to regard Time Out as creating "slots" within Appleworks Version 2. Once these "slots" have been created, then suitable applications can be "slotted-in". Because of this "slot" approach, it is very easy to add and substract Time Out applications, not only without having to reinstall the entire program but within Appleworks itself: should the need to increase desk top memory arise.

Time Out itself, as well as the above, has two other useful functions, one being that control-reset returns you to the main menu and that for custom printer buffs, control-@ is reinstated.

Time Out was reviewed last issue, so here I shall simply list the applications with their competitors: and you'll notice that stand-alone programs are the competition: *(See Figure 1)*

However, one Time Out application has to be singled out for special praise: Ultra Macros - this is easily the most powerful Macro program available for Appleworks and, together with MacroTools, is a programming language for Appleworks itself. A fact which has not been mentioned by other reviews is that it also performs as a Macro for other Time Out applications! This makes it exceptionally versatile. It has immense depth, ability, and the AppleWorks2/ UltraMacros combination must be one of the most productive environments for any computer.

COMPATABILITY

The major players in the AppleWorks enhancement/ modification game check carefully to ensure that their enhancements are compatible with the enhancements of other companies.

When doing more than one modification, always start with an unused copy of AppleWorks, follow the instructions and do the various enhancements in the order given in the instructions.

As stated, one enhancement is compatible with another, thus TimeOut is compatible with Applied Engineering and Pinpoint, but if you need to do 3 or more modifications there *may* be compatability problems. The prime ones are that PinPoint and UltraMacros are not compatible, while Cirtech expansion is compatible, but not Cirtech's 'second disk' AppleWorks enhancements in all cases. Hopefully, we'll have more precise details next issue.

CONCLUSIONS

After quite some time and experimenting and real use with a number of users; we have come up with what we believe is the best, current, optimum AppleWorks combination.

This new combination supercedes our old combination which used: AppleWorks (any) with Applied Engineering expansion; PinPoint accessories installed and autoloaded onto a Ramdisk, together with any other files. The front end/ selector was RunRun. This would all fit onto a 3.5" disk, and leave room for Copy II+ and one or two other small programs.

The hardware required for this is any II fitted with RamWorks, GS Ram or Z-RAM or RamFactor, and a 3.5" disk drive. (It can be run off two 5.25" drives, with difficulty).

This new AppleWorks system is AppleWorks version 2.0 expanded and enhanced using Applied Engineering expander (same cards as above) and all TimeOut applications installed. (These self load, as does AppleWorks, into memory.) The front end is ProSel (if using a harddisk) or simply Birds Better Bye if not. The whole fits onto 2 x 3.5" disks, although it can be run (with difficulty) from 2 5.25" drives - but you *will* need

extended memory. The best disk to run it from is a 1Meg Cirtech PlusDisk. (With the autoload-to-Ram disabled). In which case the speed is staggering. Naturally on a IIGS the disk cache is installed.

If you wondered what the future of Apple and AppleWorks was, then this is it: AppleWorks utilising all the RAM it can find; manipulating hard, floppy and Ram Disks; and with a whole host of integrated applications within it; and being programmable at the same time.

And because UltraMacros is installed, the whole is called **UltraWorks.**

Steve Morrisby

Figure 1

TimeOut Program	Competitor
UltraMacros	KeyPlayer (PinPoint)
MacroTools	None
(Programming Aids & Tools for UltraMacros)	
QuickSpell	PinPoint Speller Document Checker (Stand alone)
SuperFonts	MultiScribe (Stand alone) Printrix (Stand alone)
SideSpread	None (actually lots, but none so easy)
T.O. Graph	Visualiser (//e//c) & IIGS version Graphic Edge
T.O. Desk Accessories	PinPoint Desk Accessories (Individual DAS vary)
FileMaster	Copy II+ (utility)

(AutoWorks, FontWorks, Macro & Super Macro Works are earlier Beagle/SoftWare Touch progams, now superceeded)

The Universal Disk Controller

From Page 30

Listing 2:

```
10  REM  EJ7

20  REM  M/C TO PAGE 3
21  FOR I = 0 TO 32
22 :: READ B: POKE 768 + I,B
23  NEXT I
24  DATA  24,216,173,255,199,105,3,133,6
25  DATA  169,0,105,199,133,7,24,32,23,3
26  DATA  4,26,3,96,108,6,0,3,1,31,3,4,0,0
27  REM

30  REM  80 COLUMN MODE
31 :D$ =  CHR$ (4)
32  PRINT D$;"PR£3"
33  REM

60  REM  CURSOR TO WINDOW
61  POKE 37,0: PRINT : REM  ROW 1
62  POKE 1403,34: REM  COLUMN 34

70  REM  WINDOW
71  POKE 33,12: REM  WIDTH
72  POKE 32,34: REM  LEFT EDGE

80  REM  WINDOW ARRAY
90  DIM W$(12)
100 W$(0) = "____________"
110 W$(1) = "            "
120 W$(2) = "   EJ7      "
130 W$(3) = "____________"
140 W$(4) = "            "
150 W$(5) = " DRIVE 1 "
160 W$(6) = "            "
170 W$(7) = " DRIVE 2 "
180 W$(8) = "____________"
190 W$(9) = "            "
200 W$(10) = " Use ud^ "
210 W$(11) = " & Rtn.  "
220 W$(12) = "____________"
230  REM

300  REM  DRAW WINDOW
310  PRINT : PRINT W$(0)
330  FOR I = 1 TO 12
340 :: INVERSE : PRINT " ";: NORMAL : PRINT
   W$(I);: INVERSE
: PRINT " ":
      NORMAL
350  NEXT I
360  REM

400  REM  HIGHLIGHT ROUTINE
410 :V = 6
420  POKE 37,V: PRINT : INVERSE : PRINT "
   DRIVE 1 "
430  POKE 37,11: PRINT : POKE 36,9
440  GET K$
450  IF (K$ =  CHR$ (11) AND V = 8) OR (K$
   =  CHR$ (10) AND
V = 6) THEN
     GOSUB 800
460  IF K$ =  CHR$ (13) THEN  GOTO 900
470  GOTO 440
480  REM

799  REM  SUBROUTINES
800  POKE 37,V: PRINT : POKE 36,1: NORMAL
810  IF V = 6 THEN  PRINT " DRIVE 1 "
820  IF V = 8 THEN  PRINT " DRIVE 2 "
830  IF V = 6 THEN V = 8: GOTO 850
840 :V = 6
850  POKE 37,V: PRINT : INVERSE
860  IF V = 6 THEN  PRINT "  DRIVE 1 "
870  IF V = 8 THEN  PRINT "  DRIVE 2 "
880  POKE 37,11: PRINT : POKE 36,9
890  RETURN
899  REM

900  IF V = 6 THEN  CALL 768: GOTO 920
910  IF V = 8 THEN  POKE 795,2: CALL 768:
   POKE 795,1: GOTO
920
920  NORMAL : PRINT D$;"PR£3"
930  END
```

PC TRANSPORTER

Q.When is an Apple an IBM?
A.When you fit it with a Transporter

It really was just a matter of time until the good old Apple// could run software written for an IBM PC, but is it a serious or practical thing to do? It is potentially a major development for Apple// owners as there is a wealth ofcommercial and public domain software available under the PC banner, and so we are going to run a series of articles reviewing the PC Transporter.

In this issue we start the series with an article kindly donated by Steve Carter, a partner in Holdens Computer Services. In the next issue we will complete the article with a configuration table and price details, and also present a review of the PC Transporter from another users viewpoint.

Beam me up!

I can remember when the Apple IIGS was first launched back in December 1986, one of the suggestions was that as the IIGS was a sixteen bit machine it would be possible, without too much difficulty to have IBM PC emulation within six months; rumours of co-processor cards were rife.

How wrong everybody was. However, nearly eighteen months on, Applied Engineering, noted for their excellent Apple II expandability products, have finally come up with the goods in the shape of the PC Transporter Card.

Design

I wish I knew more in the way of the background to the Transporter because as this article will reveal, this is a truly amazing product. It has appeared out of the blue and what's more it works, not only with the IIGS but with the IIe and, would you believe the II+ as well, although you need a seperate keyboard for this. What Applied Engineering have in fact done is to put a PC compatible on to a single circuit board and it isn't, as you'd expect, cluttered with thousands of chips but a credit to the designers in using bang up to date VLSI and SMT techniques. A V30 processor is used running at 7.14 MHz and provision is made to plug in an 8087-2 maths co-processor to make things really fly!

PC Transporter can be purchased with just 256K of on board RAM and expanded very easily to 640K. Another well thought out feature is that when you're using your Apple in native mode ProDos sees the PC Transporter as a RAM card. As if all this isn't enough, AE made Transporter run up to three times faster than the average PC!

Installation

OK let's install the beasty and see if it does what it's supposed to. I installed the Transporter card in an Apple IIGS exactly as described in the accompanying manual which, by the way, is first class. The fitting instructions are accompanied by more than 30 clear photographs and you'd have to be pretty thick to get the installation wrong. The Transporter card itself is identical for either the II+,IIe or IIGS but there is a different installation kit for the IIGS. The Transporter can be fitted in any slot other than Slot 3. I had a 20Meg Hard Disk drive in Slot 7 and an Apple 3.5 Drive allocated to Slot 5 by the SmartPort so I put the Transporter in Slot 6. As most II+/IIe owners are probably not using 3.5" drives then Slot 5 would be the most obvious choice. Due to the probability of several cards present in the average enthusiast's Apple there is a slight dilemma nowadays of where to put your newly acquired card and some rationalisation may be necessary. Installing in the IIGS necessitated the fitting of a socket with an attached circuit board to the backplane of the machine for the colour monitor. A short length of cable with a 19 pin 'D' type connector, plugs into the existing colour monitor socket. Secondly a socket has to be mounted on the back plane for the disk drives you intend to use for PC or MS-DOS; more of that later. Mounting these two sockets takes no longer than about 4-5 minutes. Plugging the tails from the sockets into the Transporter and fitting the Transporter into its Slot completes the installation on a IIGS. Installing in a II+ or a IIe takes a little longer as you need to install an extra lead for composite video and another lead for the speaker. Further to this on the II+ a cable for an extended keyboard must be fitted. Not one of these operations require any soldering and the installation benefits from care rather than skill.

Disk Drives

You basically need two sets of drives, one for the Apple environment and another for the PC environment. The Transporter card supports its own drives and you can daisy chain up to four of them. Drives attached to the Transporter are usable in PC mode only and can be a 5.25" TransDrive (360K IBM type), a 3.5" Transdrive (720K IBM type), or an Apple 3.5 Drive but not a UniDisk 3.5. The Transporter support software makes it believe that the Apple drive is an IBM drive! I connected an Apple 3.5 Drive to the GS SmartPort and a 5.25" TransDrive, with an Apple 3.5 Drive daisy-chained to it, to the Transporter card. Hard disks providing they are ProDos compatible can be set up and partitioned to work as drive C.

Continued on Page 40 ☛

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SPECULATION CORNER

Rumour has it that the long awaited portable Macintosh has been delayed until next year. Apple have stated that there will be no new CPUs this year, but do they mean this calendar year or their financial year?
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Bundle 2 - for Apple IIc
Apple Unidisk 800K Drive
Version 2.1 System Utilities
Unimate software for use with DOS 3.3, CP/M and Pascal 1.1/1.2
All for just £320.00

Monitors

As with the disk drives you are presented with several choices for the video monitor. You can either stick with what you've got or take the opportunity to get a colour monitor and benefit from the superb colour implementation on this card. On the II+/IIe the composite video output is switched from either Apple mode or Transporter mode so there are no cables to switch over. There is also a separate CGA RGB output socket if you want to use one of these colour monitors, but this is just for the PC mode only. On the IIGS things are a lot simpler. Whether you use a monochrome monitor or colour monitor, switching between Apple mode and PC mode is automatic.

Sound

The Transporter routes its sound output automatically on the IIGS and through a cable on the II+/IIe. All PC sound routines are supported.

Keyboards

The standard IIGS keyboard is fully supported in PC mode and all the features like function keys are used by a combination of the OPTION key and the number keys on the top row. The COMMAND key serves as an ALT key in PC mode. The Apple IIe keyboard works in the same way using the open and closed Apple keys. The only casualty is the II+ as this machine needs a separate PC Compatible keyboard. Having said that, a suitable keyboard for the II+ would not be too expensive, in fact Applied Engineering supply their own. Perhaps your II+ keyboard was getting worn out anyway.

Mice

The Transporter supports all Apple Mice and allows them to be used in MS-DOS applications emulating either the Mouse Systems Mouse or the Microsoft Mouse.

Getting down to business

Now for the real man's stuff, does it work? Well yes it works superbly and this well designed and thought about hardware is accompanied by software of the same calibre. There are two disks supplied, a 5.25" and a 3.5" depending on which drives you use. You place one of these disks in your Apple mode disk drive and boot the machine in the normal way. A familiar PRODOS 1.4 welcome screen appears followed quite quickly by a PC Transporter welcome screen with credits to Little Blue Software! The system then automatically loads the BIOS, followed by a quick memory test (it gets through 640K in about 6 seconds!) and then tries to boot a PC mode disk drive. If there isn't a disk in the PC drive then a message to press any key and try again appears. At this stage you're ready to boot a PC-DOS or MS-DOS system disk, it's as simple as that.

Configuring

When in PC mode the Apple IIGS control panel (Open Apple-Control-Escape) is still accessible and everything is intact when you get back! Another 'control panel' is accessible by holding down the shift key whilst pressing the Caps Lock twice - a strange combination but it works! This 'control panel' is a configuration menu for the the PC disk drives and device drivers, it also allows you to re-boot the Transporter easily and quickly without having to re-boot the whole machine. I configured the system for one 5.25" TransDrive as Drive A, an Apple 3.5 Drive as Drive B, and 15Mb of an HD20SC as Drive C, the remaining 5Mb I left for ProDos. You can however partition in any proportion as long as Drive C is no less than 35K. To use a ProDos hard disk first it needs formatting under ProDos, then it needs to be partitioned with the onboard configuration routine. Finally so that it can be recognised as Drive C by DOS, it needs to be formatted by FDISK, a utility supplied with MS-DOS system software. As most MS-DOS software is on 5.25" 360K disks, at least one drive of that format is desirable.

Compatibility

After configuring the system I tried running all manner of software and never managed to catch Transporter out. Volkswriter Deluxe, DBase III Plus, Multimate, Procomm and lots of utilities too numerous to mention. The only point to watch is that of software localising; my version of Procomm starts off by launching a UK keyboard routine and unless that is disabled the function keys won't work. If you suspect that you have a similar problem launch the application direct from DOS rather than from an auto exec file which may introduce a keyboard localiser. All in all the card made my IIGS work not just like a PC but better than a PC.

Conclusions

If you own an Apple IIGS and are frustrated by the lack of really good 16 bit software for this machine, then the Transporter makes a lot of sense. Remember this card acts as a RAM card when you're using the GS in native mode. You will end up with the ultimate Apple II and a damned good PC clone all in one box. For a IIe user the Transporter makes good sense because it extends the already very useful library of software to mammoth proportions overnight. For the II+ user you've got to be keen because you're investing what amounts to a lot of money on a machine that unfortunately is becoming less and less useful. Generally speaking though for the combined cost of the Transporter, Installation Kit and a 5.25" TransDrive, I suppose it's possible to buy a cheap clone. However bear in mind this card runs a darned sight quicker than most clones, has a built in graphics controller, is built to a higher standard than anything I've seen except the Macintosh II, and you can use it with disk drives and mice that you may already own. As with any 'clone' product if you're planning on using a specific piece of software, check to see if it runs first before you buy. Also if you havn't explored the world of MS-DOS before, then it may be an idea to do a bit of research in that area to see if there is software that you might feel is useful. I highly recommend this product to all serious Apple users.

Continued in October Issue

What is your format?

Dave Ward takes up the challenge and works some wonders with Basic

Sometimes it is nice to know what type of disk is in your disk II drive; is it CP/M, DOS 3.3, ProDOS or PASCAL. This is of particular importance when you intend to FORMAT the diskette. A warning that the diskette you are about to FORMAT is a PASCAL diskette, for instance, can be useful to prevent the wasting of valuable data. Peter Davis, who recently purchased the ProCMD system (which has a ProDOS FORMAT command) from Glen Bredon, challenged me to produce a routine from an Applesoft BASIC program to check the type of diskette about to be formatted. Here is a sample program containing a subroutine that does a rather crude check but appears to work with all the diskettes, that I have tried, in my collection.

```
1  GOTO 50000

300  PRINT D$"FRE"
     :S% =  PEEK (110) + 2
     :M = S% * 256
     : POKE M,32
     : POKE M + 1,0
     : POKE M + 2,191
     : POKE M + 3,128
     : POKE M + 4,20
     : POKE M + 5,S%
     : POKE M + 6,176
     : POKE M + 7,6
     : POKE M + 8,169
     : POKE M + 9,0
     : POKE M + 10,141
     : POKE M + 11,26
     : POKE M + 12,S%

 310  POKE M + 13,96
     : POKE M + 14,169
     : POKE M + 15,255
     : POKE M + 16,141
     : POKE M + 17,26
     : POKE M + 18,S%
     : POKE M + 19,96
     : POKE M + 20,3
     : POKE M + 21,96
     : POKE M + 22,0
     : POKE M + 23,S% + 1
     : POKE M + 24,0
     : POKE M + 25,0

320  CALL M
     : IF  PEEK (M + 26) =
       255 THEN M = 10
     : RETURN

330 M = M + 256
    :M = (PEEK (M + 1) =
       224) + (PEEK (M +
       57) = 52) + 3 *
       (PEEK (M + 1) =
       165) + (PEEK (M +
       7) = 165) + 5 *
       (PEEK (M + 1) = 56)
    : RETURN

50000  DIM M$(10)

50010 D$ =  CHR$ (4)

50020 M$(0) = "Unknown
        format type"
      :M$(1) = "PASCAL
        formatted disk"
      :M$(2) = "PASCAL 1.3
        formatted disk"
      :M$(3) = "CP/M
        formatted disk"
      :M$(4) = "DOS 3.3
        formatted disk"
      :M$(5) = "ProDOS
        formatted disk"
      :M$(10) = "Unformat-
        ted disk"

51000  GOSUB 300

51020  IF M <  > 10 THEN
     PRINT "Do you wish to
     destroy this  ";

51030  INVERSE
      :PRINT " "M$(M)" ";
      : NORMAL
      : PRINT
```

The routine is at line 300 - 330 the rest of the program being used to demonstrate the method. Here is a line by line description of the program :-

1 - This transfers control to the main program at line 50000. It is good practice to place subroutines near the start of the program to improve speed.

300 - Start of the subroutine to create a machine-code routine to read block zero on a diskette and flag an error if it cannot read a, presumably, unformatted diskette.

- First the free space is maximised using PRINT D$"FRE"
- Next the memory page where the start of free space is obtained using PEEK(110) and the start of the subroutine is set a little above this to leave space just in case the variables used in the routine are new.

310 - Continuation of 300 to poke in the machine code subroutine.

320 - the subroutine is called and a check is made to see if the block zero could be read. If not variable M is set to 10 - "unformatted disk"

330 - certain bytes in the memory image of the block zero are used to determine the format of the disk. Variable M contains the code number - see line 50020

50000 - This is the main program which sets up the data then calls the subroutine at 300 and finally prints out the type of disk format it finds.

The subroutine could almost certainly be reduced in size. I have refrained from using DATA statements since this could lead to problems using the subroutine in programs with existing DATA statements.

Dave Ward

Have you written a routine that does something unusual or solves a particular problem? If so let us publish it so we can all learn from your experience.

Mac2000

Norah Arnold looks at topics of interest to the Macintosh owner.

New Macintosh Products
The product information below is obtained from advertising material published by the vendors and should be checked before purchases are made.

Animation Workshop
Aegis Development have been showing the first glimpses of three dimensional animations created with new software under development for 1988 release. The new software, called Animation Workshop, consists of a series of modules allowing for real-time, 3D animations and graphics on the Macintosh II. The software will encompass modules including a Programmable Slide Show system, a Solid 3D Animation Generator, an Animation Image Compression System, a full featured Video Titling System and an Animation Player. The modules will require at least a 1 megabyte Mac II with one disk drive, but more memory and a hard disk drive are recommended. Real-time animations can be played from disk at up to 30 frames per second or from memory at up to 100 frames per second. The price details are yet to be announced.

PC MacTerm
PC MacTerm is a program that enables the Mac user to operate DOS programs running on an IBM PC. PC MacTerm works with PC Anywhere III software running on the PC. With both programs installed, programs and peripherals on the PC can be accessed by the Macintosh. The Mac can also access mainframes through the IBM PC. The Mac sees what the PC sees while retaining many of the Mac functions; for example, mouse control and cut and paste. The price for PC MacTerm is $99 in the USA while PC Anywhere III is $145. More information can be obtained from Dynamic Processor Associates, Inc., 545 Fifth Ave. New York, NY 10017.

JT Fax™ for the Mac
JT Fax™ for the Mac is a fax modem that sends or receives Group III fax transmissions at 200 dots per inch. The transfer rate is 4800 baud. It has automatic journaling of transmissions and receptions. Multi-page documents can be sent to single or multiple locations. Using MultiFinder, receipt of faxes can be monitored in the background so a dedicated Mac is not required. A scheduler allows the sending of faxes unattended at any time of day.

JT Fax has selectable output (printer or disk) for incoming faxes. It supports all ImageWriter and LaserWriter printers.

It requires a Mac Plus or higher with a hard disk recommended. It is the smallest, most lightweight and simplest way yet to gain full facsimile features for the Macintosh.

The price of JT Fax is $695 and more information can be obtained from Citizens Computer Centre, 1905 Walnut - PO Box 737, Higginsville, MO 64037.

Super 3D
Super 3D is a sophisticated 3D graphics editor, and Silicon Beach claim that it has a superior user interface and is a powerful tool for visualisation and analysis. The user may draw in two dimensions using tools from basic drawing programs and transform objects into three dimensions. Duplicated objects are stored only once to conserve memory.

Once the three dimensional model is obtained the user can zoom in and out, move the camera in any direction, or spin the model around any of the three axes using 'Spin Wheels.' The model can be rendered as wire-frame or with the hidden surfaces removed. Intersecting polygons can be viewed by using a Z-buffering option.

Models can be shaded by the specification of up to four light sources. A more powerful version named Super 3D Enhanced uses advanced colour blending techniques to provide a superior colour display on the Macintosh II.

Super 3D can automatically

record your changes frame by frame and these can then be played back at up to 60 frames per second. Models of structures can be constructed and then an animated walk-through created. Animation is in colour on the Macintosh II when using Super 3D Enhanced.

The price of Super 3D is £195 and for Super 3D Enhanced £325. A review of Super 3D will be published shortly and more information can be obtained from The MacSerious Company, 17 Park Circus Place, Glasgow G3 6AH.

SoftBackup™

SoftBackup™ is a standalone program that backs up files to tapes or to floppy disks. It works with a local hard disk or with an AppleShare™ File Server. Some of the features include:- Volume, File and Folder level backup and restore; timed backup with automatic startup at specified times; scripts for easy selection of file, folder and volume groups; support for the AppleShare file server and related access privileges; ability to repeat backups on a regular basis and print the directory of backups.

SoftBackup supports the following tape drive manufacturers:- Apple Computer, General Computer, LoDown, MDideas, Mirror Technologies, Peak Systems, Relax Technologies, Super-Mac Technology and Xebec.

The transfer speed is 3Mb/min for TEAC standard drives and 1Mb/min for 3-M standard drives. The price is $69.95 for the single user version and $139.95 for the multiple user version supporting one AppleTalk network. More information can be obtained from Diversified I/O, Inc., 1008 Stewart Drive, Sunnyvale, CA 94086.

Flash&Match

Flash& Match are electronic flash cards for the Macintosh. Each card contains a question and an answer. The learner sees the question and then gives the answer.

With Flash&Match, you decide how you want to practise, how long, when to test yourself and whether or not you wish to record your progress. You can create your own decks of flash cards or start with the sample decks which InVenture provides.

Flash&Match works with a standard Apple font to support several foreign languages, but it also has its own subscript and superscript font enabling it to handle many science, chemistry and mathematical topics. In addition, drawings or graphics can be pasted on to any card. Progress can be stored and displayed graphically as well as numerically.

Flash&Match contains:- an Edit section where you can create and modify up to 100 cards; a Test section where test modes can be selected and there are options allowing the customization of feedback; a Student Records section which creates and modifies any number of student records, stores the last ten scores for each student and maintains a review list of all items missed; a Print section which will allow printing of decks, student records and review lists on an ImageWriter or a LaserWriter; Flash PIX - lets entertaining little cartoons play when a correct answer is given and you can edit them or add your own. Flash&Match needs 512K or more memory and is MultiFinder or Switcher compatible. The USA price is $31.90 and French-English and Spanish-English Databases are available at $47.82. More information can be obtained from InVenture, Inc., 555 deHaro, San Francisco, CA 94107.

MacSerious

MacSerious have announced the appointment of Gerry McCauley to the position of Educational Sales Manager for the UK. Gerry graduated at Glasgow University and has researched into computer applications within the sphere of Naval Architecture. His experience includes various computer systems, such as VAX, Apollo workstations, mainframes and a number of micros. The Macintosh is his principle interest however, and he has been actively engaged with it over the last three years.

Gerry feels that he will be able to support the education market, having lectured in Computer Science at James Watt College where he had experience of direct user support and with the supervising of student projects.

Graphic Point

A new High Street print and desktop publishing centre, believed to be the first of its kind in the UK, has been launched in Birmingham. Graphic Point combines the latest DTP technology with a full range of typesetting and printing facilities, to provide a complete publishing service under one roof. The 2000 sq. ft. centre is in the heart of the business district.

Graphic Point Ltd,
10 The Priory Queensway
Birmingham B4 6BS
Tel. 021 233 2905

Studio Session™

A review of this music program for both amateurs and professionals.

Many people buy their Macintosh computer without realising that they are buying, among other things, a powerful musical tool. There are now many excellent applications for writing, editing, arranging and even performing music through the Macintosh computer.

All of the above can be achieved by using Studio Session™, originated, designed and produced by Bogas Productions, San Ramon, California, USA; published by MacNifty Central, Minneapolis, Minnesota.

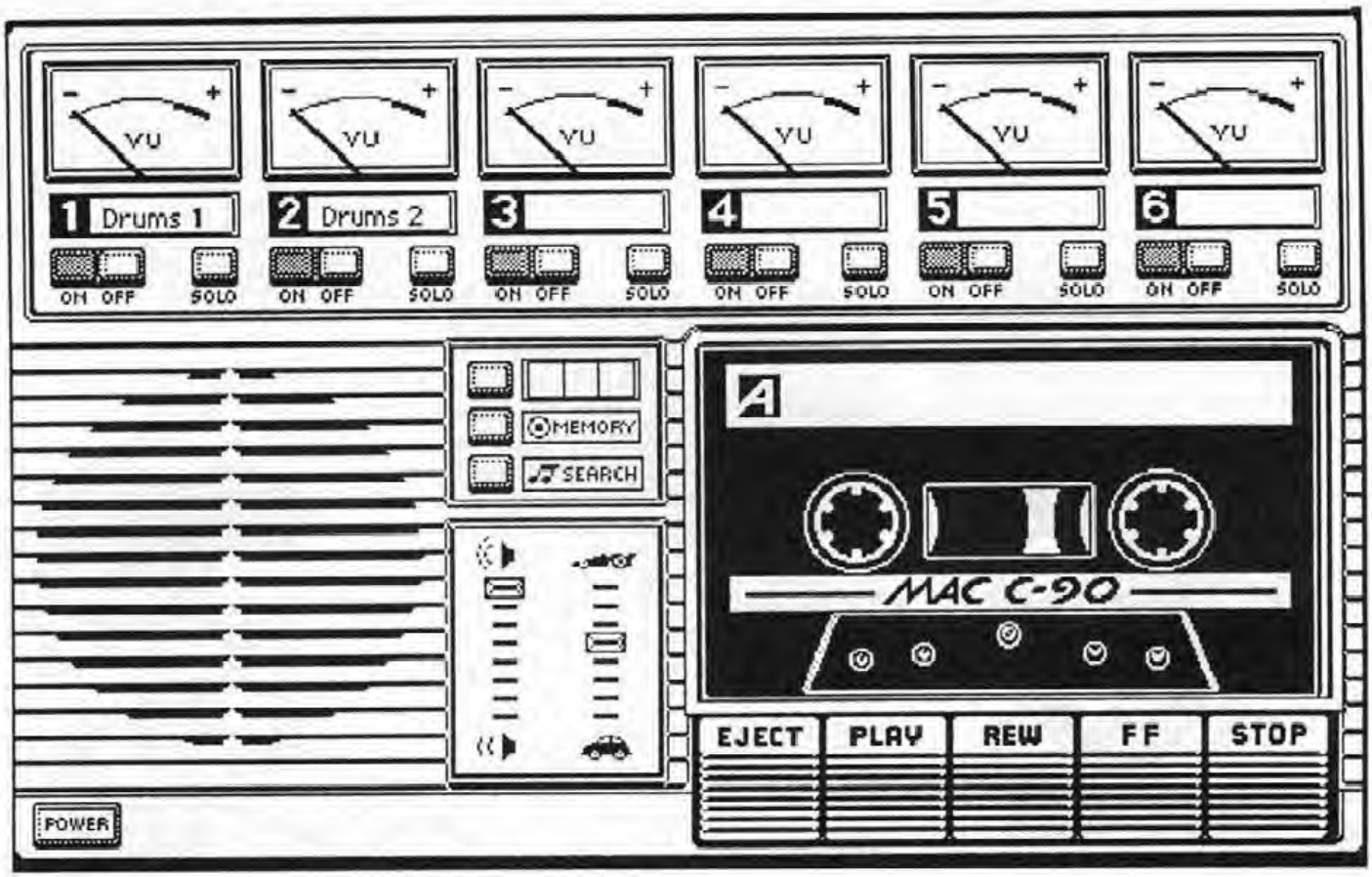
A word of warning: Studio Session must not be confused with Jam Session. If you have a copy of Jam Session, which was a pre-release demo version of the Studio Session software, do not try to play any music files from Jam Session using Studio Session. The music will not play and may cause the bomb to appear.

The Studio Session software can be copied, but the insertion of the original disk is required during startup of the Player and the Editor.

Three disks are supplied on purchase of Studio Session, - the program disk, Music 1 and Music 2. The program disk contains a System folder, the Studio Session Editor, the Studio Session Player, the Phrase Library and a folder of 'songs.' Instrument definitions and additional music are on the other two disks.

The manual very sensibly gives the user advice on memory management. Studio Session will work on a 512K Macintosh with one built-in disk drive. However this does necessitate some disk-swapping and you are limited in the number of instruments you can use in one piece of music. You can create music that employs fifteen to twenty-five instruments, depending on the size of the memory required for the definitions of the particular instruments you have chosen.

With two disk drives, things are much better and less disk swapping is needed. On a MacPlus with one megabyte of memory and two



800K drives the program works very well. Best of all, of course, is to load all three Studio Session disks onto a hard disk drive and away you go!

The Player screen is shown at the foot of the previous page and as you can see, it is instantly recognisable as the controls all mimic those on a normal cassette recorder, with the addition of some from a studio mixing board. All of the buttons and controls let you play music with the following options:-

- loading and playing a piece of music from beginning to end.
- playing through at a louder or softer volume.
- playing through at differing tempos.
- playing through all instrumental tracks.
- playing just one track as a solo.
- playing through using selected instrumental tracks.

Before you start clicking on the Player controls a musical composition and its instrumentation should be loaded into the Player. The music file is loaded normally by using Open in the File Menu. When the music file is loaded in, the name of the composition appears on the cassette label. Next, you click on the Play button, which will initiate the loading of the instruments required by that particular piece of music. According to your particular hardware setup, this step can be a bit of a nuisance or hardly noticeable if you are fortunate enough to be using Studio Session from a hard disk drive. Once the instruments are loaded the performance starts automatically.

The Memory button can be used during the plaing of music to pinpoint a place in the music to which you wish to return. The Search button is a short cut to loading another piece of music.

The Editor screen is shown below and is packed with features, most of which are easy to recognise and use. The Track Number is clearly shown on the left of the Editor window. This number corresponds to the numbering of the Output Meters at the top of the Player screen and is important because you can only work on one track at a time. There are potentially six tracks in Studio Session and an OverView command lets you scan through them for a general survey.

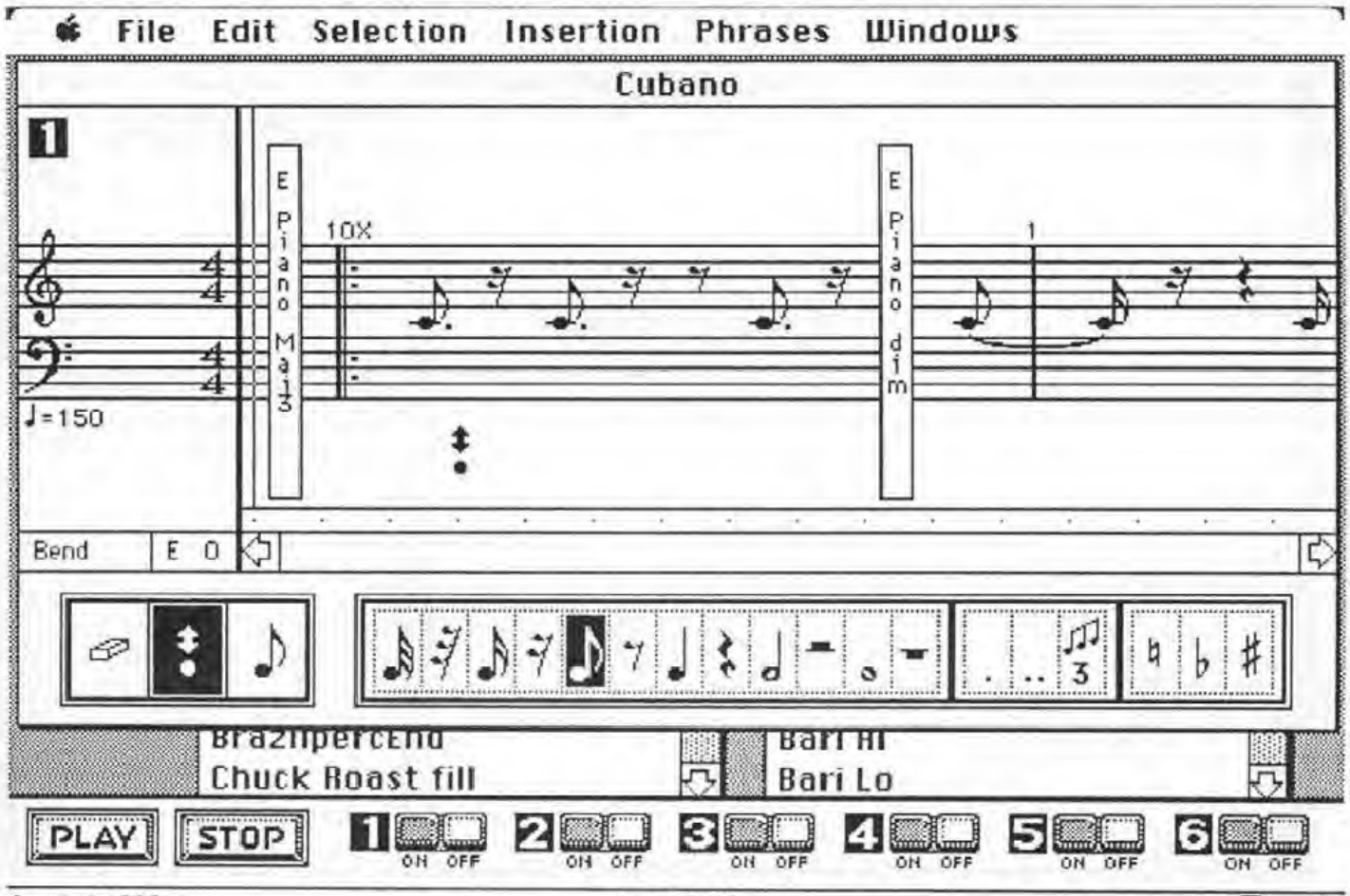
The six On-Off switches at the bottom of the Editor screen serve

to isolate tracks during the performance of music.

With music already loaded into the Editor, the Range Selector Bar can be used to select a range of notes. When the Range Selector is used many editorial functions that are shaded out in the menus become activated.

The fun thing I like best is the ability to animate Marge Boots superb drawings some of which are printed above. Studio Session is easy to use and above all, fun to use and I recommend it to anyone interested in making music on the Mac.

Available from MacLine at £69.00 + £2.50 P&P + VAT. Tel:01-642-4242.



MacSpin™

D² Software's graphical data analysis program reviewed by John Arnold

MacSpin is a program which will let the user enter, and display in three dimensions, multivariate data, and is produced by D² SOFTWARE INC. The version used for this review was MACSPIN 1.1.

The 186 page manual contains both tutorial and reference sections, as well as a section giving the background and short history of the graphical representation of multivariate data, which is a rather unusual feature, as not many software houses give the background details and the technical history of the software they are presenting.

MacSpin comes with two 400K disks, one being the Master disk, containing the System and MacSpin, and the other a Data set disk containing 15 sample data files, with the files ranging in size from 5K to 63K.

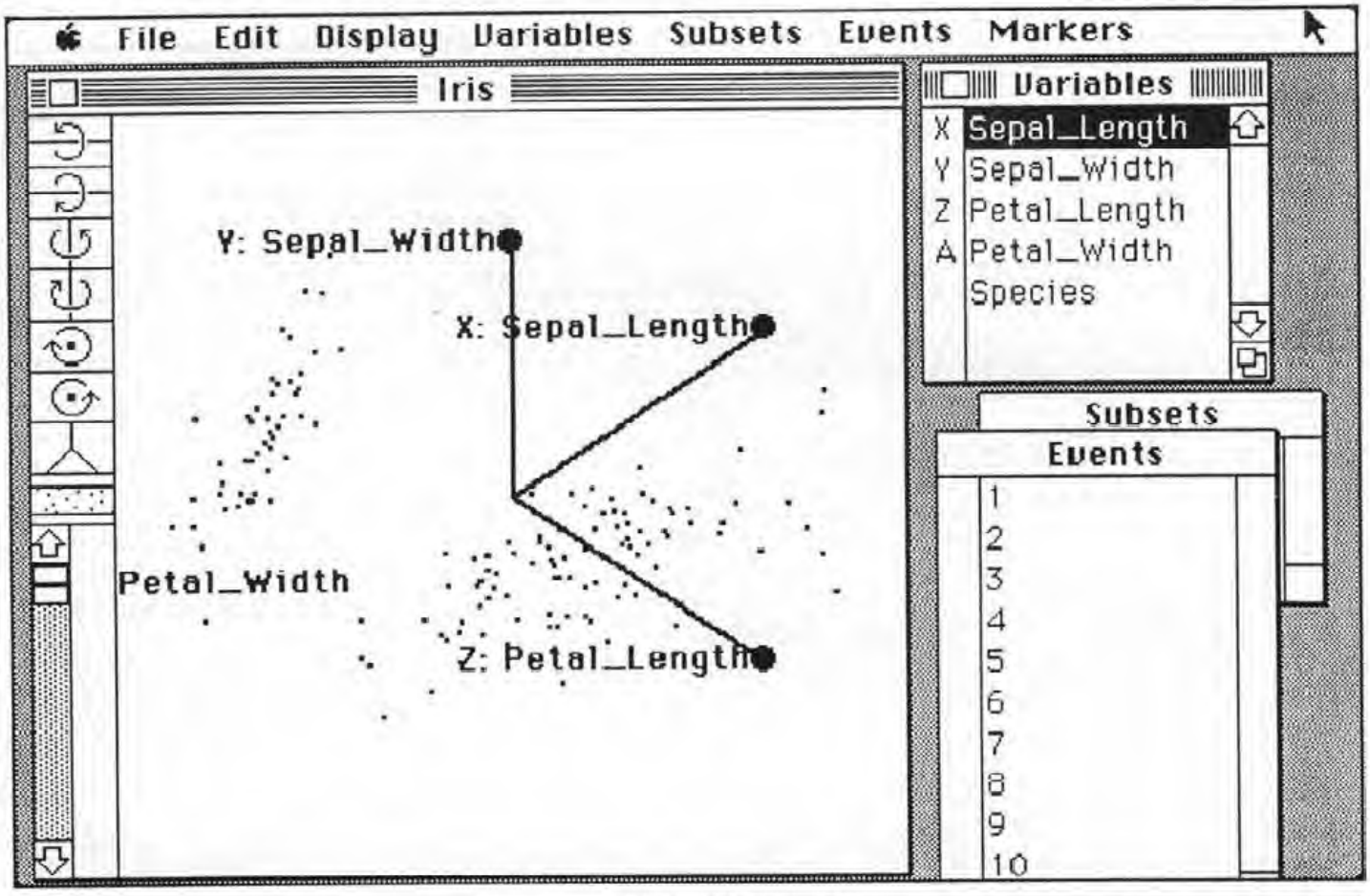
MacSpin Facilities

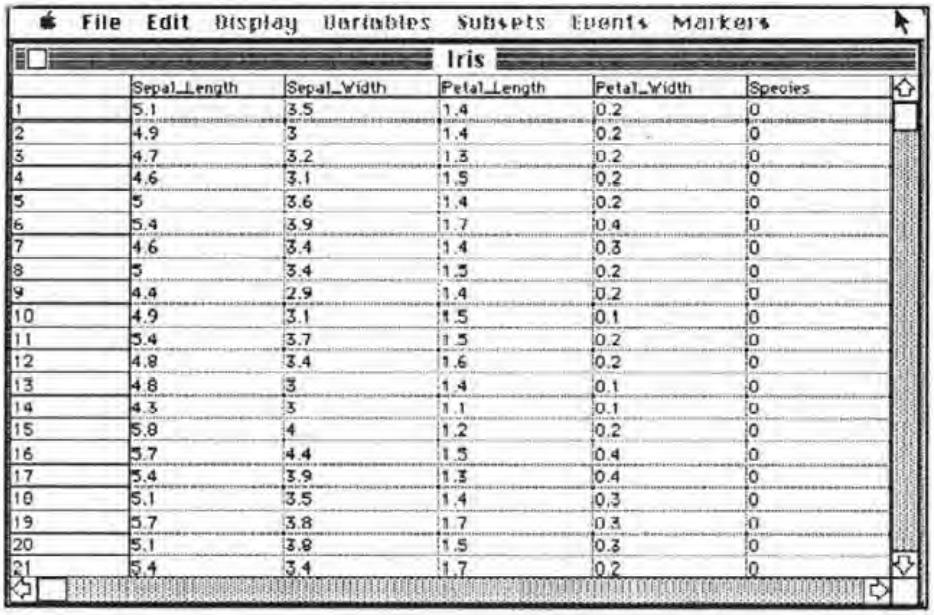
The main object of the program is to display multivariate data, and there are a number of facilities available from within the program which enable the user to display their data in a variety of ways, all essentially giving a 'three dimensional' display which can be rotated.

Double clicking one of the data files opens MacSpin and loads in the data set, ultimately displaying the data as white points on a black background, with in all, 4 windows on the screen. The windows are the graph window in which the data is displayed, and the Events, Subsets and Variables windows. The display window allows the rotation of the data set about a vertical, horizontal, and normal axis in either direction. By so doing, it may be possible to see clusters in the data, or perhaps linear features which might not be apparent from the tabular data, identify outlying observations, etc., all of which may effect the analysis of your data.

Edit Mode

By choosing 'Edit Data' from the Edit menu, the data is displayed in a worksheet, this can then be edited in the usual manner. A completely new data set can be entered into the worksheet by choosing New from the File Menu, by using the 'tab' key new columns can be formed, and 'return', having completed a row will generate a new row. There are two things about the edit mode I am not too happy about. The first is that having pressed 'return' for the last data entry, and having got





File Edit Display Variables Subsets Events Markers

Iris

	Sepal_Length	Sepal_Width	Petal_Length	Petal_Width	Species
1	5.1	3.5	1.4	0.2	0
2	4.9	3	1.4	0.2	0
3	4.7	3.2	1.3	0.2	0
4	4.6	3.1	1.5	0.2	0
5	5	3.6	1.4	0.2	0
6	5.4	3.9	1.7	0.4	0
7	4.6	3.4	1.4	0.3	0
8	5	3.4	1.5	0.2	0
9	4.4	2.9	1.4	0.2	0
10	4.9	3.1	1.5	0.1	0
11	5.4	3.7	1.5	0.2	0
12	4.8	3.4	1.6	0.2	0
13	4.8	3	1.4	0.1	0
14	4.3	3	1.1	0.1	0
15	5.8	4	1.2	0.2	0
16	5.7	4.4	1.5	0.4	0
17	5.4	3.9	1.3	0.4	0
18	5.1	3.5	1.4	0.3	0
19	5.7	3.8	1.7	0.3	0
20	5.1	3.8	1.5	0.3	0
21	5.4	3.4	1.7	0.2	0

a blank row, selecting that row and using 'Cut' from the Edit menu, gave, after responding to a dialog box, a System bomb. There was no difficulty however, about removing a row of data using the same method. Secondly having entered data and displayed it using 'Show Data', if further data is subsequently added to the worksheet, this extra data is not displayed without choosing 'Include all events' from the Events Menu, which is no trouble having been through the process once, but was somewhat disconcerting on the first occasion I added a number of data rows, only to find out later they did not form part of the display.

Returning to the main display screen, the 'row number' column is the reference label for the data row, the first three columns become the 'X', 'Y', and the 'Z' axes, with the fourth, if there is one, becoming the 'A' (the Animation) set. Otherwise 'Z' and 'A' use the same values. So in effect the programming is displaying four variables per point.

Depth Cueing

To assist in viewing the rotations 'depth cueing' is used, that is the point nearest to the viewer uses two pixels, with those further away using only one pixel for each point. Even so I found that with some data sets it is quite difficult to sense the direction of rotation. Each of the six rotation 'icons' has four modes, directly clicking will rotate as long as the mouse button is down, shift/click gives continuous rotation until the 'icon' is clicked again, cmd/click will rotate forwards and backwards until stopped as before, and option/click displays slide bars enabling the angular movements to be set.

By default the axes are not shown on the display, although if they are required they can be made visible, but not labelled, by clicking on the tripod. Option/click on the tripod will give information about the Display options and details of the viewpoint.

Animation Mode

The last icon and the scroll bar beneath it are concerned with the 'animation' mode. MacSpin makes it possible to 'display' a fourth variable for a data point. The slide bar represents the range of the 'A' variable, and the position of the thumb governs which points are visible on the display, from none, when the thumb is at the bottom to all, when it is at the top, the intermediate slices being added cummulatively. Or if the icon is highlighted then only the individual slices are displayed.

Option /click on the icon gives the animation options, which can be changed, and option/click on the scroll bar will show the max, min or intermediate value.

Changing the Variables

It is extremely easy to change the variables plotted. By opening the variable window, highlighting a variable (which causes the labelled axes to be displayed), and

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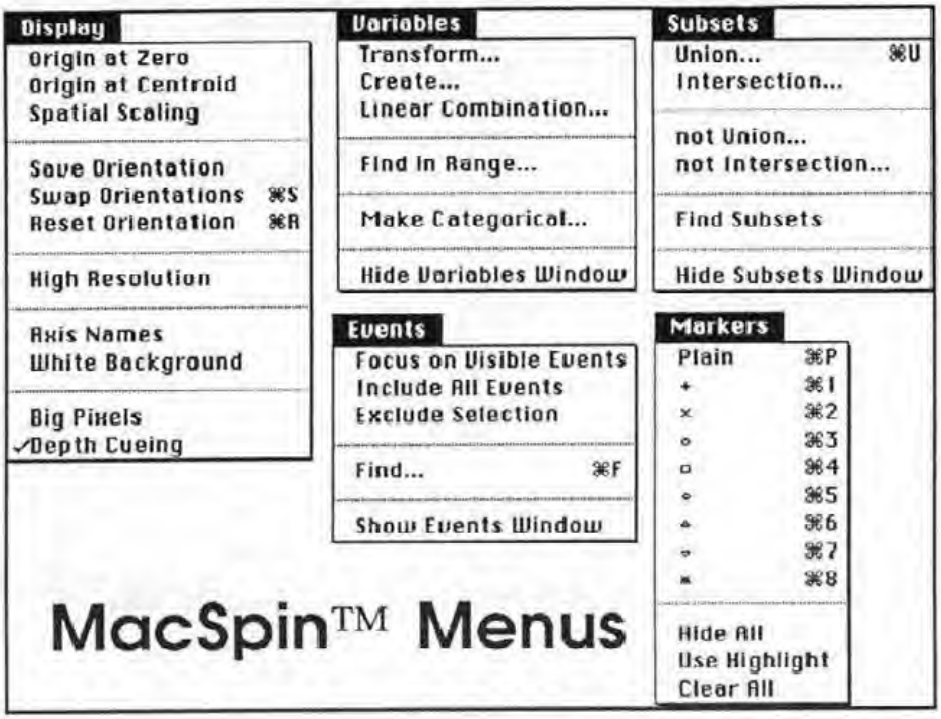


dragging across to the ends of an axis, then that variable becomes the variable for that axis.

Also while a variable is selected, option/click will display the basic elementary statistical values for that variable (i.e. max, upper quartile, median, lower quartile, min, mean, and standard deviation), and option/cmd/click displays a scrollable dialog box showing all the values of that variable, sorted from min to max, with their event label.

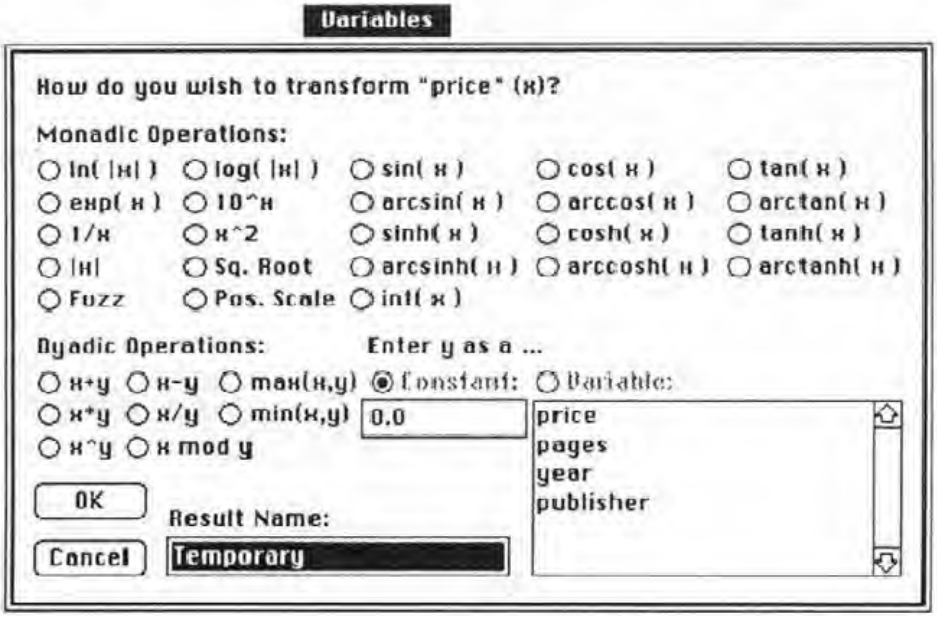
If a similar exercise is carried out while the events window is open then we can get either the values of X,Y,Z,A or all the values for the selected event. This can also be done in a similar manner by selecting an individual point on the display window, with the additional option of using cmd/click anywhere in the window to zoom in on that area.

The Menu Bar

So far all of the above can be performed with hardly a touch of the menu bar.

The File menu is the standard one, the Edit menu has the additional choices of Editing names and edit/show data. The other menus allow for.. **Display** used for changing the appearance of the display, (the position of the origin can be set at zero, or at the centroid of the data set, the default screen which is of white points on a black background without axes or labels, can be changed, etc.) with the option for saving a particular orientation. **Variables** allows for the transformation and combination of one or two of the variables, via dialog boxes. **Subsets** enables the user to select from their data subsets, which can then be viewed seperately from the main data values. The sets can be combined by using union or intersection etc. **Events** enables the user to choose what events are displayed. **Markers** gives the choice of marking individual data points with variously shaped markers, eight extra symbols being available.

MacSpin allows no detailed analysis to be performed on the data, for this the data must be imported into one of the standard statistical packages, and this is perhaps an area that could be addressed when new versions of MacSpin are being developed, it would be marvellous to be able to do all the analysis, as well as the rotational displays, from within one package. In the meanwhile, however, there seems to be no problem in transferring data between packages, as MacSpin will read text files, providing the format of the data line is as specified in the manual. This should allow the transfer of data from mainframe systems into MacSpin, should that be required.



The Data Sets

The Data sets provided on disk, contain a number which are of statistical interest, choosen specifically for interesting features which become apparent when displayed in MacSpin. We are told D^2 Software will be collecting data which is of interest when viewed in MacSpin and that all registered owners will be notified of new data sets, as they become available, which will be purchasable, although no price is given. The manual gives details of the data sets provided, with suggestions of techniques to use for getting the most illuminating diplay for that particular data.

Hard copy can be obtained via a Print Setup Dialog box, and Print... from the File menu. The full area of the output page is used and the full resolution of the LaserWriter can be used. The Print... item allows the user to add a

caption, which will form part of the printed output.

Also copying a plot to the clipboard will enable that plot to be pasted directly into MacDraw, or MacPaint etc. so that changes can be made to the image before printing, should it be necessary.

I thought the program seemed to be rather slow when reading in one of the larger data sets, so in order to carry out a timing test, and a test of importing data into MacSpin I wrote a very short Pascal program to generate on disk a text file (53K) containing 2000 rows, each with three random integers. MacSpin read the file in with no problem, although it did take almost 5 minutes (from disk) and just over 4 minutes (from RAM disk) until the data was finally drawn on the screen. When set on continuous rotation, using this data (i.e. 2000 points) MacSpin took about 2 minutes to do a complete rotation, most of the slowness being, no doubt, due to the extremely poor number crunching abilities of the Macintosh. Having got the data in, and saved the data in MacSpin format, the time to reload the new file was much reduced, in all, 16 seconds from OPEN to picture. (I was pleased to observe that no linear features can be seen, compared with the example set of random numbers provided on the data disk.)

The system /program disk is protected, with copying to another disk, or hard disk being possible, the master disk then being required every 10th occassion the program is run, or every 7 days, whichever comes first. I found the protection to be somewhat inconvenient, as the working disk I made, although operating in the fashion stated, required me to rebuild the desktop both on quitting the program and on booting up, which while not preventing MacSpin from running could be somewhat disconcerting to some users, particularly as the system folder disappeared completely! (on reflection I may have been using an oldish system and finder).

I find while writing a review of a software package that it is very convenient to have both MacWrite and the package in memory at the same time so that I can flip back and forth. However this seems not to be possible with MacSpin, I could not get it to work under Multifinder, using a one megabyte machine, nor coveniently under Switcher 5.0, the first giving the dreaded system bomb and the second an interminable set of disk insertions, when used in combination with MacWrite. Perhaps I was being slightly unfair, as I was only using one disk drive, in an attempt to simulate the working condition of the majority of Macintoshes in my college. However with an external drive MacSpin and MacWrite work perfectly well together under Switcher.

Conclusion

MacSpin would only be of interest to users having multivariate data to analyse, and as indicated above, some other statistical package would also be required.

I found MacSpin to be an interesting piece of software, which I enjoyed using, with some rather nice data examples provided, and very easy to use, apart from a small question mark about the edit mode. The copy protection was sometimes inconvenient, and could be a hinderance in some situations, such as an educational environment, as I discovered when I attempted to show it to an interested colleague at College, only to find my ten uses were up, and the Master disk was at home!

For statistical purposes, well worth getting, as it provides additional armoury in the analysis of multivariate data.

A backup copy of the MacSpin disk is available to all registered users for $10.

info

Product : MacSpin ™
Publisher : D² Software
Available from :
Logotron
Dales Brewery
Gwydir Street
Cambridge
CB1 2LJ
Price : £149/£189+VAT

Value :
Performance :
Documentation :

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With an oath, I clicked Find File for the 43rd time that morning.

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News from Apple

The latest press releases from Apple UK of interest to Macintosh owners

Apple at the European Unix User Show

Apple Computer's recently launched A/UX™ operating system has had its first European public showing on the Apple stand at the European UNIX User Show.

A/UX gives users who need the power of UNIX™ or who need to use particular software that runs on UNIX the ability to run it on Macintosh, thus retaining the advantages of Macintosh ease of use, productivity, and presentation and publishing capabilities.

A/UX is compatible with both System V.2 and BSD 4.2. It incorporates Ethernet communications protocols (TCP/IP), transparent network file access (NFS), automatic system crash recovery and self repair functions.

Apple has just announced the first major UK order for A/UX systems, from the Computer Sciences department of Queen Mary College in London.

Apple Launches DeskTop Presentations

On 14th June, Apple Computer UK announced a range of DeskTop Presentations solutions at EP '88 at the Wembley Conference Centre, making them the first computer manufacturer to address this growth market.

A range of peripherals for generating high quality overheads and slides was on display there as well as a full range of presentations such as Microsoft PowerPoint and Cricket Presents. The latest in DeskTop Publishing - artwork and illustration, page layout and document processing - will be on view, and the new Apple CD-ROM drive will be shown for the first time in the UK.

David Jones and Colin MacGregor both spoke at the concurrent seminars.

Major UK Promotion Announced for Apple and Micro-Soft

Apple and Microsoft have joined together in a promotion that will include full dealer training, an incentive marketing campaign and an unbeatable offer: buy Microsoft Word™ and Microsoft Exel™ from August through October, and receive a complementary copy of the professional presentation software Microsoft PowerPoint™.

As part of the promotion they will host a joint event for dealers, followed by in-depth training for Apple dealer staff on Microsoft products. Promotional material including direct mail packs and point of sale material will be provided, and a supporting advertising campaign will run in the trade and business press.

Microsoft was the first independent company to offer software for the Macintosh at its launch in 1984, and has led the market ever since. With Word, Works, and Exel, Microsoft currently has three of the best-selling software packages for the Macintosh.

Because software for Macintosh is all written to common standards and all uses the Macintosh graphical interface, users find the software easier to learn and work with than software written for other personal computer ranges. Consequently they use their Macintosh more and use a wider variety of software. Recent studies by Peat Marwick and the Gartner Group have confirmed that these factors lead to measurable and very significant increases in productivity, and to reduction of training and support costs.

John Leftwich, director of marketing, Apple UK, said: "Microsoft has been with Apple since its earliest days. This promotion underlines our commitment to each other, and our belief that together we offer an unbeatable solution which delivers real desktop productivity to professional and corporate users."

Fiona Kelly, Microsoft product manager for the Macintosh comments: "As the Macintosh market matures, so the expanding range of hardware allows us to develop more varied business solutions. The increased productivity of Macintosh users is coming, not just from the traditional fields of word processing and spreadsheeting, but from entirely new fields - such as desktop presentations. This joint promotion reflects the close relationship between our companies at all levels, and indicates the importance we both place on enriching the capabilities of office computing."

To qualify for the Microsoft PowerPoint offer, users need only buy both Word and Exel between August and October this year. The purchases need not be made together, although they should both be from the same dealer.

Apple Computer Acquire Orion Network Systems Inc.

Apple Computer Inc. has announced the acquisition of Orion Network Systems, Inc. of Berkeley, California. Orion develops and markets IBM-compatible Systems Network Architecture (SNA) software products, that allow non-IBM processors to communicate over networks with IBM processors. This aquisition underscores Apple Computer's commitment to integrate the Macintosh® personal computer into industry standard computing environments.

"This announcement gives prospective customers, who want to enjoy the Macintosh benefits of higher productivity, ease of use and lower long term cost of ownership, additional assurance that their Macintosh systems will work happily within the IBM SNA environments in which so many enterprises have invested," said Jane Burley, Apple Computer UK marketing manager for DeskTop

Communications.

Orion president Paul A. Rampel commented: "Operating as an Apple subsidiary allows Orion to distribute its products to a much broader audience. Orion believes our new relationship with Apple benefits our existing OEM customers by increasing our investment in new product development. Also, the relationship benefits Apple's customers by ensuring a flow of new products that enhance communications between Apple and non-Apple computers."

Orion has had a working relationship with Apple since 1984. Orion worked closely with Apple Computer's software engineering group to bring the MacAPPC® product to market earlier this year. MacAPPC is Apple's software implementation of two key protocols of IBM's SNA: Logical Unit 6.2 and Physical Unit 2.1. MacAPPC lets Macintosh applications communicate with mainframes, minicomputers and personal computers from IBM and other vendors. Orion's terminal emulation products let Macintosh computers emulate IBM displays in a network; its office systems products let Macintosh computers exchange documents and files within an SNA network. Both Orion and Apple development teams will continue to work closely on future products.

Three Apple representatives will sit on the Orion board of directors, chaired by Apple senior vice-president of research and development, Jean-Louis Gassee. The company and its 31 employees will remain in Berkely.

Orion will operate a wholly-owned subsidiary of Apple Computer and will continue to license its products to other vendors. Currently, Orion supplies more than 30 OEM (Original Equipment Manufacturer) customers including AT&T, Apollo Computer, Olivetti, Philips, Prime Computer, Honeywell Bull, NCR, and Intel. Financial terms of the aquisition were not disclosed.

Apple's principal technology objective in 1988 is aggressively to expand its networking and communications solutions. Apple is actively integrating Macintosh into SNA, OSI, and DEC environments. In January Apple announced that it will work with Digital Equipment Corp. to jointly develop products that integrate Macintosh personal computers and AppleTalk® networks with VAX™ systems and DECnet™/OSI enterprise networks.

Orion is the second company intended to enhance Apple's networking and communications technology to be acquired this year. Network Innovations, of Cupertino, which brings standard database access technology to the Apple platform became a subsidiary of Apple in March.

Special Offer for Graphics Professionals from Apple and Letraset.

Two leading names in publishing and design, Apple and Letraset, join forces from 13 June 1988 in a special campaign to promote a Macintosh-based DeskTop Publishing system aimed at graphics professionals. The advertising that supports the promotion is itself produced using the Apple and Letraset products on offer.

The system includes a Macintosh II and LaserWriter printer with ImageStudio, ReadySetGo!4 and Adobe Illustrator software from Letraset. This system is particularly suited to tasks such as photograph retouching, line art generation and page layout.

The advertisement which supports the campaign in design and graphics publications was itself produced on the Macintosh II using ReadySetGo!4, Image Studio and Illustrator. The advertisement is also being circulated on disk to all participating Apple dealers, who will in turn be able to use it for their own advertising or demonstration purposes.

As well as advertising in the design and graphics press, Apple and Letraset will also be writing directly to existing design and graphics clients about the offer.

Details of the systems available in the offer are as follows:

1. Macintosh II with mono monitor; ImageStudio, ReadySetGo!4 and Illustrator software, and LaserWriter IINT printer: £8,495
2. AS above but with LaserWriter IINTX printer: £9,695

The special prices are available until 12 August from participating dealers.

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PostScript Art from the UK

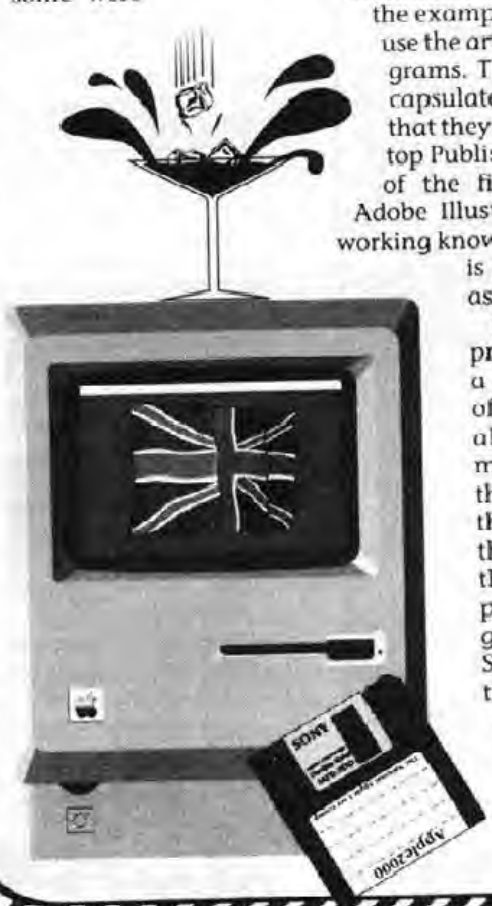
Dave and Irene Flaxman evaluate a set of artwork with a European flavour

You may have noticed the apple cores at the top of page 2. The basic image was copied from one of the Visual Arts disks, then it was scaled to differing sizes (within Aldus PageMaker) and output to an Apple LaserWriter Plus at 300 dpi.

This page shows further examples of the PostScript artwork from The Visual Arts Set One, but this has been output to a Linotron 300 at 2540 dpi, to show the true quality of the artwork. Again, some images were scaled, and some were rotated and/or sheared within Adobe Illustrator to obtain the desired effects.

The Visual Arts collection comprises four disks and a manual. The disks include Clip-Art, backgrounds, borders, a set of DropCaps, and some special shading effects. The manual gives some tips on how to use the artwork effectively, it includes a full pictorial index of the four disks, and it shows some examples of how the separate files may be combined to form attractive composite pictures.

The artwork is primarily intended for use with Desktop Publishing programs. It has been tested with PageMaker and with Ready,Set,Go 4 - so the examples and tips show how to use the artwork with these two programs. The files are saved in Encapsulated Postscript format, so that they are easy to use in a Desktop Publishing environment. Most of the files were created using Adobe Illustrator, so if you have a working knowledge of that program, it is possible to modify them as you choose.



I was pleased to see a UK product being marketed for a change, and the quality of the artwork is exceptionally good. MacLine are marketing the package in the UK. I do not know how they will be distributing this overseas, but I hope they do so - it would be pleasant to see the traffic going from the UK to the States, for a change. I also think that the quality of this artwork is superior to that we see being imported from USA, so it is a good example of British talent.

Electronic [illegible] Ltd is a new company, and this is its first offering to the public, but the second set of PostScript Clip-Art is expected to be ready for publication later in 1988. The artwork results from the vision of Mark Lewis (of MacLine fame), who tries so hard to bring in good software from the States at reasonable prices. He joined together with artist Paul Curtis (who created all the images) and Derek Goldman to form the new company. The set of four disks costs £65.00 (plus VAT). I feel that this represents good value, and the artwork demonstrates very effectively that the UK can produce quality software to rival anything from the USA.

THANKS....

....to **MacLine**, for loaning the artwork to us for evaluation. Any members wishing to purchase the Clip-Art should telephone Derek on 01-642-4242.

.... to **Adobe Inc**. for loaning us copies of the new Stone fonts for review. This page has been set using Stone Sans Serif for the titles, and using Stone Informal for the body text.

....to **P's & Q's** of Liverpool for processing this page on their Linotron 300. They offer a full range of typesetting services. Their telephone number is 051-236-7953.

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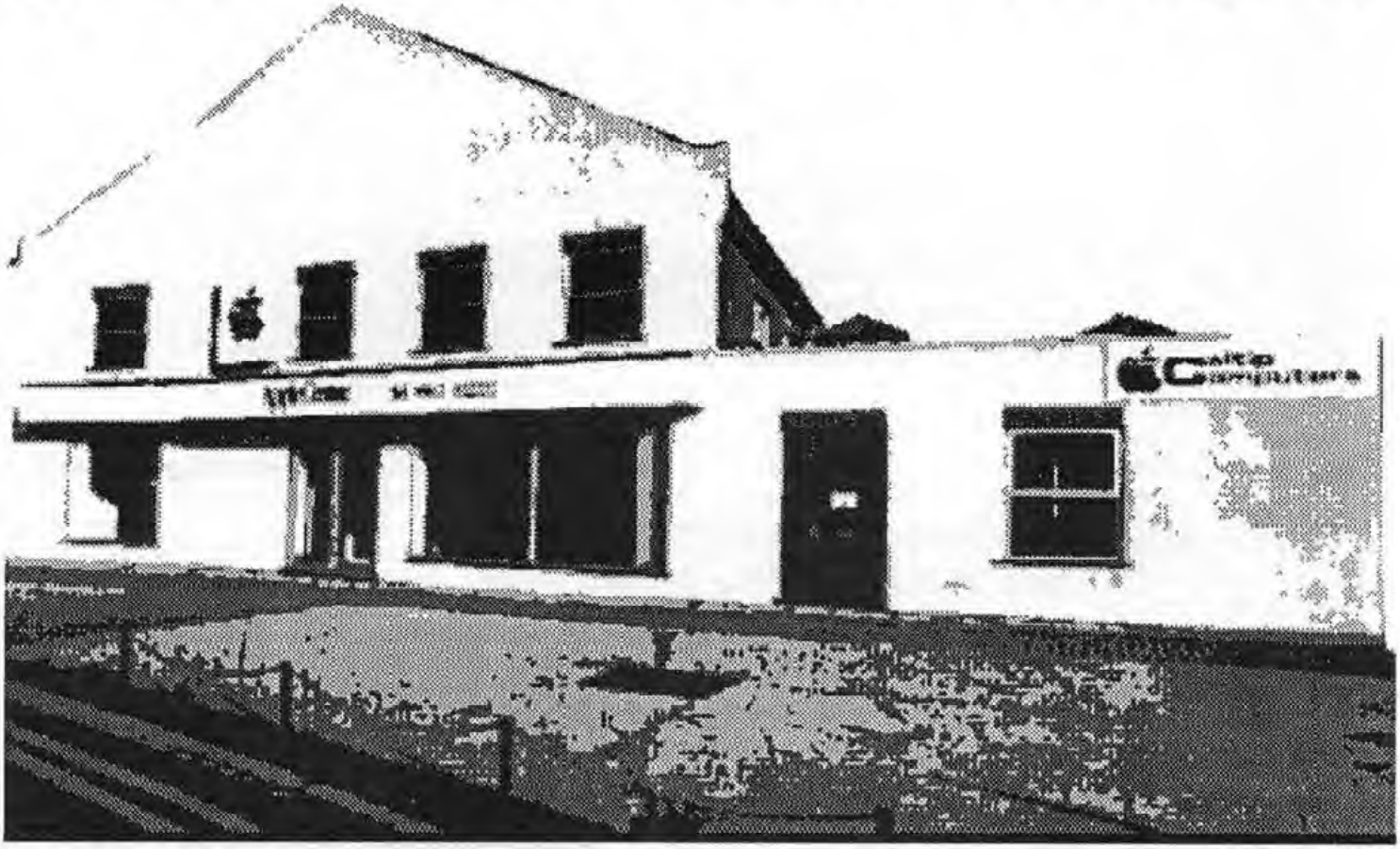

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Getting Started

Downloaded from Usenet: Getting started with Mac programming.

From: Byron Han
Subject: Re: **Getting started in Mac programming.**
In article <1911@rayssdb.ray.com> dwh@rayssdb.ray.com (David W. Humphrey) writes:-

>>Can someone please offer an experienced Mac user and a budding Mac programmer some sound advice as to how to get started in Mac programming?

I have a 512Ke, but am considering selling it and getting an SE or a II. By what I've read, I think MPW seems like the best thing to buy, but I see that a lot of people use Lightspeed C.

Also, what documentation and independently written texts do you recommend? I have vols. I & II of 'Inside Mac' and plan to buy the rest.

I just finished reading 'MPW and Assembly Language Programming' by Scott Kronick. The book is great, but I feel like there should be a vol. 2 to go along with it - it seems incomplete. <<

Easy part first
- documentation
Inside Macintosh I
- basic stuff required.
Inside Macintosh II
- file system, drivers, etc, finder interface
Inside Macintosh III
- not really necessary
Inside Macintosh IV
- good book. Mac Plus stuff, HFS
Inside Macintosh V
- SE/II. New Sound Manager, Color QuickDraw, etc. lots of stuff in System 5.0 and 6.0 backpatched to +/SE
Inside Macintosh XREF
- not really needed.
Macintosh Technical Notes
- really good to have around.

Development Environments - harder to answer

C - Lightspeed C and MPW C
Lightspeed C is a faster compiler and has automated primitive project management. Cannot mix C and Pascal code. Lightspeed C is cheaper.

MPW C requires purchasing MPW Shell/Assembler product which provides professional development environment with lots of tools. Lightspeed C is MultiFinder compatible.

Version 3.0 of Lightspeed C (soon to come) will feature source level debugging. Version 3.0 of MPW (which will come out this year probably) will have source level debugging, and professional project management suitable for large multiple programmer projects.

Pascal - Lightspeed Pascal, Turbo Pascal, MPW Pascal
Lightspeed Pascal has source level debugging. Version 1.11a or so (the latest) is NOT multifinder compatible. Automated primitive project management. Cannot mix C and Pascal code. Cheaper than MPW Pascal. MPW Pascal requires purchasing MPW Shell/Assembler product. Turbo Pascal is from Borland International and like Lightspeed Pascal NOT MultiFinder Compatible. It does not have any project management at all.

Version 3.0 of MPW - see above. THINK is rumoured to be working on a MultiFinder compatible version of LSP.

Performance of MPW is probably not going to be pleasing unless on an '020 machine. Development under MPW is really nice under MultiFinder and sufficient memory for a decent sized RAM cache. 2Meg minimum under MultiFinder.

For development on an SE/Plus, the THINK Technologies products would probably be nice for C or Pascal. Or Turbo Pascal.

Debuggers
The two biggies are TMON and Macsbug. There are people who will swear by one or the other. They are playing feature tag. MacsBug can handle 68881 and 68851 opcodes, TMON cannot (as of version 6.0B1 and 2.8x respectively)

Good luck with Macintosh Programming - lots of patience and perserverence helps. As well as the ability to laugh at oneself when one discovers dumb mistakes.

This is NOT an official endorsement or position of Apple Computer, Inc.

I have no connection with the MPW Projects at Apple.

I have no connection with Symantec Corporation (parent of THINK Technologies).

I have no connection with Borland International.

This is an informational posting only.
Byron Han,
Communications Tool
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From: Guido van Rossum
Subject: **Re: Getting started in Mac programming...**
I'd like to make a comparison between LightspeedC (LSC) and MPW.

I have used MPW much longer than LSC, and am convinced that it generates better code, has a much more intelligent linker, and a much more powerful programming environment. Especially if you're used to Unix programming, MPW makes the transition easy (you can write Makefiles and shell scripts, albeit with lots of minor changes in the notation). It is also particularly easy to port all sorts of tools that were written for use under Unix. Often no

changes are needed.

For Mac hackers, MPW's resource compiler and decompiler (rez/derez) are superior to what LSC offers (I think 2.11 came with a prehistoric version of RMaker).

However, LSC also has its advantages. The compiler and linker are so much faster than MPW's that program development time shrinks enormously, especially if you're working on a small machine (1 Megabyte, 2 800K floppies, or even a 20Meg HD).

In general the exclusion of certain features and deliberate lack in flexibility have made it a remarkably fast system; you can enter LSC, run your application and return to LSC in the time MPW needs to execute the startup file...

I plan to do my future code development under LSC, while generating production versions with MPW.

Because of the better optimizer (automatic register allocation, for one!) and smarter linker (removes unused functions, not just unused files), MPW applications are easily 20% smaller than those generated with LSC.

Unfortunately you have to make a conscious decision to use both MPW and LSC with the same sources. There are many differences, and porting a program written for one to the other may cause you many headaches.

Language Differences

Some language differences I've observed (in LSC 2.11, vs. MPW 2.02):-

- int==short in LSC, int==long in MPW;
- names of standard headers differ, e.g. <Windows.h> in MPW, <WindowMgr.h> in LSC;
- toolbox routines require Pascal strings in LSC, C strings in MPW; Points passed by value to toolbox in LSC, by address in MPW;
- MPW defines '\n' == '\r'; in LSC, stdio translates between '\n' and '\r';
- LSC's library contains more unix emulation functions;
- LSC does strict type checks on pointer assignments, MPW doesn't care;
- LSC doesn't allow "benign" redefinition of preprocessor symbols;
- LSC needs glue to call Pascal functions given as function pointers;
- LSC doesn't automatically dereference function pointers in call contexts;
- LSC preprocessor doesn't define __LINE__ and __FILE__ macros;
- LSC has no equivalents of Unix -D and -I compiler options;
- LSC has CtoPstr and PtoCstr, where MPW has c2pstr and p2cstr;
- in LSC, the difference between two pointers is a long!

It is possible to program around all of these using a few simple macros; however, if you didn't plan this you'll have a hard time, especially in finding all the incompatible toolbox calls.

As far as I know, neither system has much debugging support beyond generating symbols for Macsbug. –

Guido van Rossum,
Centre for Mathematics and Computer Science (CWI),
Amsterdam

Open 9.00 to 8.00, Monday to Friday;
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Word 4.0

Jeff Meyer reports on his first look at Microsoft Word 4.0 - downloaded from Usenet.

Summary of preview showing of Microsoft Word 4.0
Got a chance to see a demo of Microsoft Word 4.0 last night at the Word Processing SIG of the Seattle Macintosh dBUG (downtown Business Users Group) last night, and thought the net might like to hear about some of the things I saw. I'll just work from notes, and draw a few conclusions at the end.

John Reingold, the product manager for Word 4.0, demonstrated the program on a Mac SE and a Mac II. Many of the Microsoft programmers working on the project were also there (not to mention a few from Aldus and other local Mac software companies). Apparently, none of the people who worked on 3.0 are working on 4.0 (this seemed to be considered something of a "feature" by the membership).

It was particularly interesting to see 4.0 on a color monitor, because color is used very well by the application — particularly by the outliner, for differentiating between various outline items. The program was apparently an alpha version; suffice it to say that they were doing things on it that I'd hesitate to do with a beta version, i.e. they were *using* it, not running it through "safe" operations. Looked very solid — overall, this preview reminds me a lot of the Excel demo MS gave us before it first came out. Smooth and very powerful.

Style Sheets
Last month, I heard that style sheets are much "smarter" in 4.0. I think I complained on the net a few months ago about how frustrated I got when I had a font style (Bold) assigned to a style in 3.01, yet applying the style didn't change the font to Bold. Someone pointed out that in 3.01 I needed to change the text to Plain Text first, and then apply the style. That struck me as very counter-intuitive. In 4.0, styles are smart enough to figure out how to apply themselves onto other styles to get the proper result.

When 4.0 is first opened up, things don't look much different. The first change you notice, though, is a rectangle on the ruler labeled (I believe — I was farther away than I wanted to be from the screen) "Styles". Clicking on the rectangle causes a menu to pop up from the ruler with all the various styles that have been defined for the document, just like fonts. Thus, to apply a style, you select your text, pull down the menu on the ruler, and voi... much faster. Apparently you can also define and modify styles from this menu also, though I didn't see this.

View Mode
Basically, you can switch your document, at any time, to View Mode, which is basically WYSIWYG for each page. Or maybe WYSAWYTIWYG (What You See And What You Type Is What You Get). When in View Mode, all the tables and illustrations and columns show up as you would see them. However, what's really neat is that you can go in and edit them right there. No having to open the header, footer table or footnote items; you move your cursor into the header area and type away. VERY easy for a new user to understand.

I assume that typing volumes in the View Mode is slower than the normal mode — otherwise, why ever have View Mode off? The changes to the headers and footnotes weren't noticeably slow from where I stood (that was watching a Mac II, however).

I also didn't notice whether two-column modes appear in the same manner as they did in 3.0 in non-View mode. It strikes me that having View Mode on or off is akin to the discussion people were having about FullWrite having a "WYSIWYG off" mode for faster typing; but again, I didn't ask (ah, the questions I have *now* that I wish I'd asked last night!).

Outliner
The outliner can now preserve all the styles, fonts, etc. of the actual text in the outline mode (no more Geneva, unless you want it that way); you can physically drag outline items around the outline, like Acta. It also allows you to color-code outline items, which looks really good (if you've got a color monitor). Whole thing looks a lot cleaner.

Illustrations
Text, graphics and tables (Oh boy! More on that later) can be placed on a page, like sidebars in FullWrite, though there are no "Floating Sidebars", outside of placing an illustration in text as a character. Also it only wraps in a rectangular manner — no wrapping to the contours of an irregularly shaped/curved illustration.

It appears that you can move stuff around in View Mode by clicking and dragging. Didn't get a chance to see them insert graphics and have it wrap — they had a prepared document at this point.

Tables
This feature is going to sell a LOT of copies of Microsoft Word 4.0. Basically, Word has an structure for doing tables, and it's very simple to think of. A table in 4.0 is basically a collection of cells in rows and columns, like spreadsheet cells. They hold text (or, I imagine, graphics if you store each graphic like a character).

You can apply styles (style sheet styles too!), fonts, spacing, anything you can apply to standard paragraphs, to a single cell. Or a row of cells. Or a column.

The rows can expand as you change information in a row. You can expand a column by dragging a "column pointer" that appears

on the ruler for each cell division.

You can change column sizes for all rows, or one row, so that you can have uneven columns for your table, or two-tier tables, etc. Same with row widths – they can be even or uneven. You can drag columns to the left or right for the entire table, or for a single row. Same with dragging rows around columns. And I mean "dragging", i.e. dragging with a mouse (though I wouldn't be surprised if you can do it from the keyboard, too).

In short, this is one of those things that causes people to say "Of course! How simple! Why didn't someone think of this before?" Immediately intuitive.

Best of all, Word 3.0 tab-separated tables (and, I would imagine, tab-separated tables in other formats) can be converted to 4.0 cell tables. And there are tons of features you can define for your tables – do you want a box around it, width of the lines between cells (or make 'em invisible), row heading options (I think – it sure looked that way). Calculations appear to be done in the same manner that 3.0 did them, i.e. these may be cells but there aren't any formulas to them.

Amusing side note: someone asked whether PageMaker would be able to read tables from Word 4.0 files. One of the Microsoft programmers said "I believe so – as soon as we give them the table definitions." He then turned to one of the chief Aldus programmers and said, "How about it?" The Aldus engineer said "As soon as we get the file format from you. It's at the top of the list." From the horse's mouth, folks.....

User-Modifiable Menus

I think Microsoft is calling this something along the lines of a "changeable user interface"; I prefer "user-modifiable menus", as it is the menus which are modifiable, not the entire user interface. However, the menus are COMPLETELY modifiable... you can get rid of OPEN, you can move PASTE into the WINDOW menu, you can put up a menu for ANY Word operation, etc. You can save and load menu configurations, and there's a reset option that returns them to their normal style.

This will be particularly nice for multiple people using menus – each can save the configurations they use, or save configurations for various tasks.

The manner of adding menus is particularly nice: a selection box comes up with an alphabetical list of every operation that Word 4.0 can do (about 350 of them, apparently). You find the one you want to add/move, select it, and then move it to the position you want it at on a menu that pops up from the selection box, that reflects the state of the particular menu you're adding the function too. Also, for any of the 350 menu commands, you can select the command and hit a HELP button, which describes what the function does. Good place to put it.

This is the first Macintosh program that has really had "Have It Your Way" menus that I can remember, at least to this degree.

"Warm Links" to Excel

I'm still a little fuzzy on this... I believe that 3.0 currently allows you to import a graph or chart from Excel. They now have what they call a "warm link" to the Excel document with the graph or chart you imported. The warm link (I believe) associates the Excel graphic you imported with the Excel document you grabbed it from. If you make changes to the Excel document (and thus change the graph or chart which is based on the document's data), you can open the word document, activate the warm link with Excel, and update the imported graphic in Word with a single operation.

To update the graphic in this manner requires MultiFinder, however, and enough memory to run both Word 4.0 and Excel at the same time. By the way, they imported color Excel charts on the Mac II color screen – nice.

Other Stuff

This isn't a sure thing (they said it'd probably be in 4.0), but if you have two word documents, you can run a "automatic red-lining operation" which produces a third document that shows the differences between the first two with various editing marks, like crossed-out text and the whole works. Again, this isn't promised, but they say it's very likely.

Updates

If you bought Word 3.02 after May 1st, the upgrade to 4.0 is free. It's $75 to upgrade it, unless you got the Microsoft Newsletter that went out to registered Word owners with an offer of $50 upgrade if you "reserve" your upgrade by sending MS an enclosed card or giving them a phone call. New manuals will be part of it; they should be greatly "cross-referenced". My personal impressions are that manuals are going to be needed less in 4.0 than in 3.0.

EPSF and Graphics

Basically, Postscript support is about the same as it was for 3.0. The major change is that by holding down the SHIFT key when selecting OPEN, you can open any file. And 4.0 will understand what to do with MacPaint, PICT (I believe) and EPSF (kinda) files. With EPSF, it strips off the graphics and allows you access to the postscript code, which you can dump in a 3.0 postscript window.

Dictionary

Nothing major, though they say that it should have the same dictionary as the IBM Word 4.0 program has (is this expanded?). They promise that "Francisco" will be spelled correctly in the dictionary with 4.0.

Memory Requirements

Word 4.0 will run on a 512K Mac! They said it will have full functionality in 1 Megabyte with room to spare, which is what everyone was really waiting to hear.

Full Menus/Simple Menus is still there (no features seem to have been eliminated from 3.0, mostly just easier methods for things), though you could simulate them with a Menu Configuration set.

SuperPaint 1.2 Bundling

They couldn't comment on this, though they seem rather startled when we pointed out the MS Newsletter announced that SuperPaint 1.2 would be bundled with 4.0. Probably has to do with the complexities and restrictions of inter-corporation dealings. Word Finder and the macro package they distributed to 3.0 users will definitely be bundled with it.

Repagination

I assume that it's completely gone, with View Mode on or off. I

heard it was gone, but I didn't check the menus to see.

Numbering of paragraphs, table items, etc. seems to be the same as 3.0, i.e. it's not dynamic, you have to do a Renumbering operation on it.

Word Count

Yup, call up an operation and find out the number of characters, words, sentences and paragraphs in the document. I asked if you could do it for selected text, instead of the whole paragraph, and Jeff said no, but "that's a neat idea", and looked at one of his engineers. Maybe...

If you store your main and usr1 dictionaries in a folder, Word 4.0 remembers where the folder is between sessions (after you've found them the first time). Since you have to manually open user-defined, they don't remember where you stored those...

No promised release dates were made, but September or October were discussed. Sounds like they'd like a month or two of intense beta testing beyond what they've already done. I think you can be pretty sure that a Word 3.0 bug fiasco is not in the cards for 4.0, simply due to the precautions they're taking.

General Conclusions

First of all, this was an alpha demo which I did not get my hands on, so remember that I'm only speaking from what I saw. I think this is a good tool, but demos like this always bring out enthusiasm untempered by personal experience with the product. Only fools and financial analysts speak of the future as a certainty...

4.0 Overall:

It seems to me that everything possible has been done to allow 4.0 to be as visually-oriented as possible while still keeping the general Word look. Commonly-used features like style sheets have been made more convenient, many more things can be moved by dragging or moving a mark on the ruler, etc. As opposed to 3.0, which I felt was very derivative of it's IBM antecedents, Word 4.0 is a *Macintosh* application, not a converted IBM program. It appears that the designers have listened to their customers complaints and suggestions, and have taken them to heart, while bringing a dose of common sense to the product as well.

When someone releases a new version of a program which is more powerful AND much easier to use than it's previous version, I want to shake their hand. From the demo I saw, it looks like Reingold and his people deserve applause all around; this is the kind of update that shows a lot of people were thinking about what they were doing. Between Excel 1.5 and Word 4.0, it appears to me that Microsoft's Macintosh division has decided to stay competitive in the market through performance instead of company recognition. Let's hope this continues...

Word 4.0 vs FullWrite

Since I have FullWrite and Word 3.0, and have been one of FW's biggest boosters, I feel I should say something about them in comparison. I chose FW over Word 3.0 because of two things. The first is that I like FullWrite's immense range of abilities and it's (to my mind) pretty successful attempt at being a be-all, end-all document processor; it does things for me that no other word processor on the Mac (or on any other micro or workstation I know of, for that matter) can do.

The second was that I found much of 3.0's interface to be very frustrating, particularly the style sheets and the outliners. I'll want to work with 4.0 for a while before saying anything definite, but it looks to me as if the latter objection can be put to rest with 4.0. I still like FullWrite interface better, but I admit that's I'm using graphics and citation functions more, and tables less, than other people I know.

If I had to recommend a high-end word processor for general use or business use (ignoring for the moment FullWrite's memory demands, which isn't a issue for me but will be for the average 1 MB user and for Ashton-Tate's market in general), AND if Word 4.0's release version shows all the promise this demo has, it's a case of deciding between two very good products — it depends on what tasks the writer wants to put the application to. Generally it seems to come down to 4.0's tables vs. FullWrite's tons of graphic extras, and I suspect that, for a lot of business people, tables will be a feature worth choosing.

Of course, I'll have to re-evaluate the two when FullWrite comes out with their new version. Right now, I'd look at FullWrite as a word processor with a visionary user interface and enormous scope, that has some problems with speed and graphics placement. Word 4.0, on the other hand, is a full-featured word processor that has sanded down all the rough spots until it has an immensely smooth, very intuitive user interface. Word 4.0 doesn't have all the power and features of FullWrite, but it *does* fit the market it's aiming for — business and high-end general purpose document processing — almost perfectly.

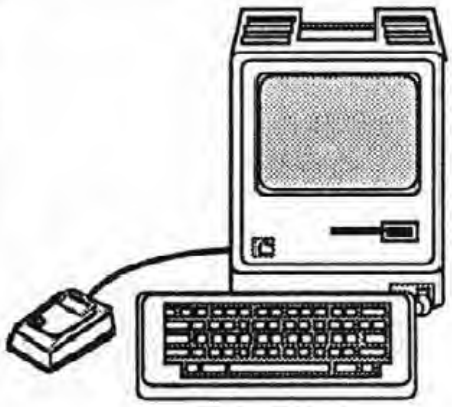
A few weeks ago, a graphic designer friend of mine went to see Illustrator '88 demoed. He came back fuming. I asked him why he was so frustrated, and he said, "I bought Aldus's Freehand a few weeks ago, and was really pleased because it did everything Illustrator did, and I was able to toss Illustrator away. Now Illustrator '88 just added auto-tracing. Freehand doesn't have it, and I have to use both programs!" I think I understand how he feels now... Two excellent products competing against one another is good for the user, because each has to keep up with, and top, the other in features that the user wants to buy. However, if you're like me and hate to wait for "your" application to catch up, you need to buy both. Impatience is costly in the software industry...

Moriarty, aka Jeff Meyer

From: moriarty@tc.fluke.COM (Jeff Meyer)

Microsoft® Word is an established word processing program published in the Uk by
Microsoft Limited
Excel House
49 De Montfort Road
Reading RG1 8LP
Tel. (0734) 500741

Usenet is a loosely-coupled network of co-operating academic and commercial computer systems. It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.



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The Reality of DTP

David Hewson, of WordSmith fame, deliberates on the uses of Desktop Publishing

The more I work at desktop publishing, the more I hate the phrase. DTP is, in many ways, a sales trick designed to fool the layman into thinking that he or she can produce beautiful publications – books, magazines and newspapers – as easily as the professional. I never cease to be amazed by the large number of otherwise intelligent people who genuinely believe that the purchase of a Mac and a piece of page makeup software, of itself, will turn them into skilled page designers and visual communicators.

Even more amazing are the people who continue to believe this when their efforts finally appear out of the laser printer looking like nothing on earth. I used to have one chap who was forever sending me his newsletter and inquiring why it studiously failed to win a single prize in any of the many contests he entered. The publication in question had ever Mac DTP device possible. The drop caps were highly ornamental, page categories were, inevitably, laser printed Cricket Draw shadows, and every typeface in the LaserWriter Plus made an appearance somewhere in its eight pages.

The whole thing was as readable as the user manual for a Serbo Croat vacuum cleaner (as were the words themselves if you got that far, but the effect would have been the same if the text had been written by Raymond Chandler). It was a complete mess to everyone but its creator to whom it was a work of art.

Now not all DTP-produced publications are that bad, but it's a fact that not all are that good either. I was lucky in getting into DTP at the very beginning. I got Cricket Draw shadows, fancy drop caps, and other typographic monstrosities out of my system early on, and learnt the hard way that publishing is about getting people to read your pages, not trying to cram as much as possible onto the paper with as many twiddly bits as you can squeeze in around the edges.

When I work with DTP today - and that's quite a lot, at least a dozen colour magazines this year, with another six books – the less I use the tools which many other people regard as DTP's heartland. My pages now are simpler than they have ever been, and conform pretty tightly to a design grid developed to give me a rigid structure throughout the length of the publication. Too many people design every page on the fly because they think the software makes it easy. Technically, that *may* be the case... but think of the poor reader. He is the most important part in the process.

It may be fun to mess around with a graphics program to produce a heading saying 'Classified' that's a masterpiece in PostScript and would take weeks to draw conventionally. But if the end result is less readable than the same word set in plain New Century Schoolbook 24pt bold, what's the point? I used to believe that new art packages for the Mac would help us create a new era in publication design. I don't any more. Maybe there are no new ideas under the sun, or maybe the right artists and designers haven't come along.

Art packages are useful, of course, and both Illustrator 88 and Freehand are wonderful for producing colour covers that would cost a fortune using manual techniques – and I'm delighted that Wordsmith was the first to show them in action. That's what I believe a DTP magazine should be about – demonstrating the outer limits of our software in print. Too many publications crow about technology in their pages and secretly rely on conventional typesetting and the scalpel behind the scenes. But these tools should always be regarded as additions to the range of facilities at the publisher's disposal, not replacements for the way things were done in the past.

The great problem with DTP is that some people try to tell you that it is so powerful you can actually become a publisher without learning publishing skills. Those who would never believe a similar line in another field – buying a spreadsheet will make you an accountant, for example – fall for this one hook line and sinker because they want with all their hearts to believe it is true. The world is full of intelligent souls who are genuinely convinced that there isn't much skill to putting together publication pages, beyond being able to write and spell.

The truth is that good DTP actually demands more, not less, skill from the user - even someone who, like me, has spent most of his working life earning a livelihood through publishing. In the past, I never needed to know about technical printing matters like kerning, halftone screening or imposition. I never had to make page designs work to the last letter or worry about consistencies in typographic style. There was always someone on the production side of the job to do these things for me – whether it was a typesetter, a sub-editor, a designer or a printer. Now I have to

take responsibility for them all – and get them right, for if I don't no-one else will.

As it happens, I like that duty, but not everyone does or is capable of accepting it. This level of responsibility also shapes my approach to the equipment I use. I don't want people to look at my publications and say... 'that's very nice for desktop publishing'. I just want them to see an elegant and well-produced magazine or book assuming, usually, that it came out of a conventional publishing process. I want those results quickly and reliably. So I'm willing to spend more than the average user on software and hardware simply because it's the only way I can get what I want. Enthusiastic Mac fans are often appalled when I tell them that most of my working life revolves around two programs – Word for writing and XPress for page makeup (though I'm getting fond of FullWrite for writing articles). These two are my choice through simple practicality, not preference. Only Word can pass on typesetting information into page makeup with the accuracy I require, and only XPress can set type to the increments and standards which I need if my pages are to look like standard typesetting. PageMaker and RSG4 are fine in their different ways but that isn't my end of the market – I couldn't produce any of my magazines using their limited control over leading and typesize, leaving aside aesthetic considerations about kerning and letterspacing in which XPress is infinitely superior, though in ways which might not be obvious to the average DTP user.

I hate having to learn new software and only review packages that I find intrinsically interesting or feel may have some facility to offer me in my general work which, I never allow myself to forget, is publishing, not computing. If there is one bad thing about the Mac (no, there are several, but that's another article) it's the temptation to play, to pretend that this easy little interface can bring out hidden talents in you, be they in publishing, writing, art or music. I just don't believe it... you can only get out what you can put in.

To close then, let me tell you the giveaway signs which, to me, spell a DTP-produced publication which has come out of the hands of someone unversed in general publishing skills. There are a lot more rules than this but these are very obvious shortcomings... at least, they're obvious to me. Clearly lots of people never notice them, but that doesn't mean we shouldn't try to adhere to some standards.

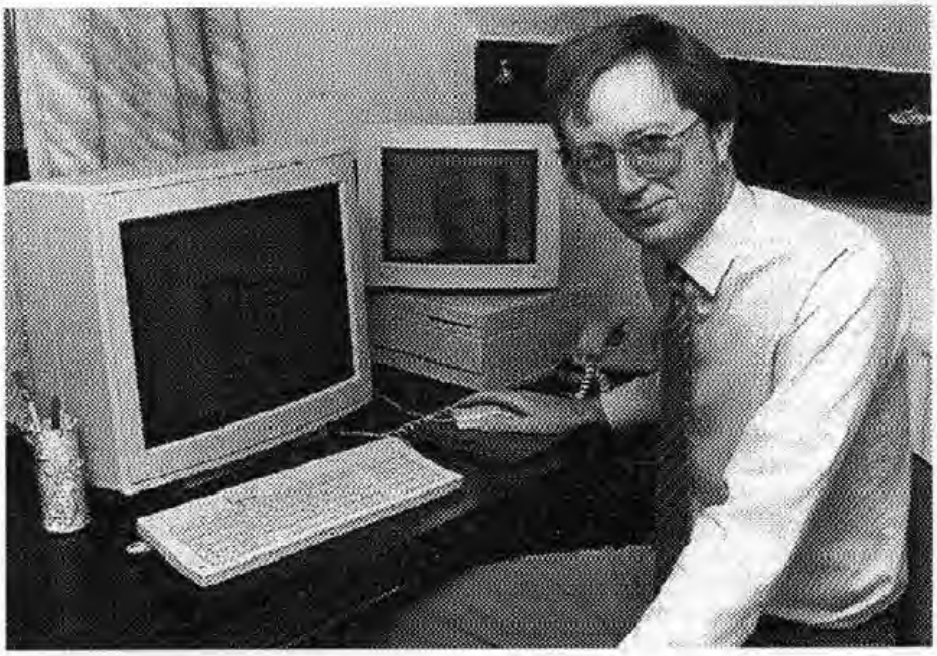
First, *never, ever* use underlining in a DTP page. Underlining just doesn't exist in typesetting. Under*scoring*, which places a fine line some distance away from the type, does. Unlike Mac underlining, it doesn't run through the descenders either – giggle. Now that's really horrible. If you want to emphasise body type use italic or bold face; if you want a rule under display type *draw* the thing properly.

Second, always get your spaces right. In typesetting there's only one space after a full stop or other punctuation mark, not two as the copy typist is taught.

Third, always use opening and closing quotes – Keycaps shows you how or you can use Smart Quotes – not the straight up and down typewriting one. This is a real giveaway. And differentiate between dashes (– or —) and hyphens (-). They're not the same.

Finally, work out a grid and structure for your publication, horizontal and vertical, so that you begin stories at set points on the page wherever possible. Don't just think of a good headline and then expand the type to make it fit – try to use the same size type for the same function throughout the publication.

To publish successfully you need something that no computer can teach you... taste. And for that I'm eternally grateful.



David Hewson was a journalist on The Times and The Independent before quitting to develop his own company, Mandarin Publishing Ltd. He is the editor of Wordsmith, the first Mac-produced commercial magazine in Britain (launched January 1986), author of The XPress Companion (Heyden & Son), editor of ComputerLand Magazine, which is produced on the Mac II, and author of a series of guide books on Spain, produced with Word and XPress, due to be published next year. Wordsmith costs £10 p.a. for six issues from Mandarin Publishing, The Old House Church Road, Kennington, Ashford, Kent TN24 9DQ.

Network News

The latest news, tips and gossip from the networks.

From: Alexander Falk <K360950 @aearn.earn>
Subject:**Standing a MacII on its side** (from AUC Digest)
In his msg. Mark Powers <MP14STAF@MIAMIU> writes:
> What's the real scoop on standing a MacII on its side? I know the manual says don't do it. Has anyone done it ?<
There are mainly two reasons for not standing a MacII on its side:
1.) If you set it up with its left side down the vent opening is on the floor and so you prevent air circulation inside the unit. This will cause overheating of your MacII and may result in damage to your CPU. If you set it up with its right side down you can't access the interrupt/reset button any more. Also the disk drive is then only 2 centimeters above the floor and acts like a vacuum cleaner (to your floor - not to the disks....).
2.) The hard disk in your MacII is mounted in a position that only allows for horizontal setup of your CPU. If you place the CPU on either its left or its right side this will result in a positioning of your hard disk that will surely cause severe damage to the heads in the disk drive and will not only void your warranty but also shorten the mtbf (mean time between failures) of your hd.
Conclusion: Even if you buy a special stand for your MacII that will enable air circulation in your unit by setting it up 3 centimeters above the floor you will still loose your warranty and cause damage to your CPU.
Alexander

From: Thomas Fruin <FRUIN@hlerul5.earn>
Subject: AUC List: **Re: standing a MacII on its side**
Aren't you exaggerating, Alex? Are you _sure_ this is bad for the hard disk in the Macintosh II? The only thing I heard was that it might be useful to format the hard disk while in the vertical position, because the heads might be aligned a fraction differently.
If positioning a hard disk vertically is that bad, why would vendors be selling kits to set it up that way? Why does IBM tell you that its OK to lay an IBM horizontal or set it up vertically, if it could damage their hard disk?
— Thomas Fruin
fruin@hlerul5.BITNET
University of Leiden
The Netherlands

From: Alexander Falk <K360950@aearn.earn>
Subject: **Re: Re: standing MacII on its side**
Well this is true, but the IBM's internal hard disk is mounted in a way that won't harm the hd, if the unit is put on it's side. If you look at the main axis of the hd (the main axis of the inertial tensor) you will see that it is exactly in a right angle to the main axis of the IBM CPU. In the Mac II the main axis of the HD and of the CPU are parallell so the HD in a Mac II won't stand on it's long side (as the IBM's HD does) but it stands on it's short side.
Now if you consult the manual of typical hard disk manufacturers you'll notice that a hard disk's warranty will be voided if you mount it this way.
So I don't think I'm exaggerating with my statement that you should not use the MacII when it stands on it's side.
By the way: this is also what Apple Technical Support (AppleLink: TECH.COMM) says.
Alexander

From:
Subject: Re: **CD ROMs and Video Disks**
I strongly suggest that anyone looking for a videodisk driver out of Hypercard get The Voyager Company's (213-474-0032) "The Voyager Videostack: A Toolkit for Interactive Video". It supports the Pioneer 4200, 4100, 6000 and Sony 1200, 1500, 1500P, 2000, 2000P, 1000A videodisc players. It is designed for you to examine their scripts and copy their player control buttons and resources. The DIN8 to RS232 cable cost $25 and the software is about $50. Truely awesome stack for video-player enthusiasts.
Phil...
(I have no affiliation with Voyager other than being a satisfied customer.)

From: Norbert Mueller <K360171@aearn.earn>
Subject: **Molecular Graphics**
Ball & Stick 2.0
(this is a text only excerpt from a Mac-document - forgive the "funny" characters out IBM-mainframe created)
A Molecular Graphics Application for Apple Macintosh* Computers
COPYRIGHT 1986-1988 BY NORBERT MUELLER AND ALEXANDER FALK, UNIVERSITY LINZ, AUSTRIA

Ball & Stick is a molecular graphics program for scientists in research, education, and industry. Because of its mouse driven menu and dialog user interface it is easy to use and integrates fully into the Macintosh* environment.
With Ball & Stick (or B&S, as we call it shorthand) one can display, manipulate, print, and plot molecular structures. Version 2.0 was developed from its internationally well accepted predecessor incorporating many suggetions from users all over the world. Originally B&S was intended as a desktop-publishing tool for chemical publications in the field of organic and biological chemistry. Several enhancements (see next page) in version 2.0 make Ball & Stick an even more versatile instrument also for inorganic chemists, crystallographers and molecular biologists. Also the scope of the program has now been extended beyond the needs of scientific desktop-publishing by several options for customization of the program operation and facilities for structure manipulation (see list on next page).

Ball & Stick can display wireframe, stickball and space filling models of molecular structures consisting of up to 3000 atoms depending on available memory size. Stereo images, perspective, zooming, and arbitrary orientation in space can be chosen by simple pull down menu commands and user friendly dialogs. High quality printouts may be obtained taking full advantage of the maximum resolution the printer used offers. B&S optionally uses PostScript gray scales on appropriate printers. This applies in particular to the Apple LaserWriter* family. Color devices are supported (color screens of arbitrary size, impact dot matrix printers, thermal transfer printers, and plotters). Color printing is also possible on machines equipped with black and white screens only.

Standard TEXT-files (ASCII), that can be created by any text editor and most word processors, provide structure input and most coordinates downloaded from a database query can be immediately read without or only minor modification. Besides Cartesian coordinates conformational (internal) coordinates (bond lengths, angles and dihedral angles) are also accepted as input, which offers a simple way to build new molecules from scratch.

The images created by Ball & Stick can be saved to disk in the standard 'PICT'-format. This format can be read by many graphic programs available, which can therefore be used to modify the pictures. The Clipboard and Scrapbook can also be used to transfer graphics data from Ball & Stick into other applications such as word processors and page layout programs.

Animated displays (Rcomputer moviesS) can be generated by transferring frames to an animation program like VideoWorks II* or Hypercard*. This task is greatly facilitated by two new batch operation commands and the Hypercard* Stack MovieMaker that now comes bundled with Ball & Stick.

Ball & Stick runs on Macintosh* computers from the 512KE upward including the Macintosh II (at least 1MB of main memory is recommended for good performance, however). It supports color if appropriate hardware is present (color screens and color printers) and is MultiFinder* compatible. A special fast version for the Macintosh II is also available (see next page). Upon request custom versions e.g. for special accelerator boards and A/UX may be obtained.

Ball & Stick 's user interface is designed so that any person acquainted with the Macintosh user interface can use it without introduction. The documentation will be available in September 1988 (free upgrade for all who bought it earlier). There is online help, and on the program disk there are some example and explanatory files.

New features in Ball & Stick 2.0

% Mouse-selectable atoms

% Rotation around bonds

% Rotations of the whole molecule are cumulative now

% Rotation of a plane defined by 3 mouse selectable atoms parallel to the viewplane

% Add/Remove bonds interactively

% Atom-info by double-clicking

% Batch operation for creation of animation files

- B&S can read a series of coordinate files e.g. describing a dynamic process and create a PICT file from each

- B&S 2.0 can create a series of PICT files for a rotation process around a bond or a coordinate axis

% The Hypercard* Stack MovieMaker, bundled with Ball & Stick can be used to create animated displays of molecular processes using the above PICT file series.

% 99 user customizable atoms (radii, patterns, colors)

% Most program settings are customizable

% Load/Save of program settings

% Fullscreen display mode & black background option e.g. for taking screenshots with a camera

% Use of 64 -step grayscale on printers supporting PostScript

% Realistic space filling model (the earlier model is still available as RSimple Space FillingS)

% Extended labeling features (e.g. user tags)

% Stereo images for red/green goggles

% Stereo images are now interchangeable

% Maximum atom number 3000 (hardware dependent)

Where to order Ball & Stick :

Send your purchase order and (preferably advance) check (sorry, we cannot charge credit cards) to:

Dr. Norbert Mueller
Institute of Chemistry
Johannes Kepler University
A-4040 Linz AUSTRIA

A Macintosh II only version "Ball & Stick II" offering a large speed advantage is available.

There is a 50% discount for educational institutions and students on all prices except mailing.

*Apple, Macintosh, MultiFinder, LaserWriter, A/UX, and Hypercard are trademarks of Apple Computer, Inc. VideoWorks II is a trademark of MacroMind. PostScript is a trademark of Adobe Systems, Inc.

From: Christine M Gianone <SY.CHRISTINE@CU20B.COLUMBIA.EDU>

Subject: **Announcing Macintosh Kermit Version 0.9(40)**

This is to announce Macintosh Kermit 0.9(40), by Paul Placeway of Ohio State University and Matthias Aebi of ECOFIN Research and Consulting, Ltd, Zuerich. MacKermit 0.9(40) runs on all Macs except the 128K original. If you have a 128K Mac, you should keep version 0.8(34), the last formal release.

As of 0.9, MacKermit has been translated into Apple MPW C, so that it can be edited, compiled, and built on the Macintosh itself. This translation was based on work by Jim Noble of Planning Research Corporation, who converted MacKermit 0.8(34) from SUMACC C (which had to be cross-compiled on a UNIX system) to Megamax C. Matthias converted Jim's version to MPW C, and he also added many of the new features listed below. After that, Paul Placeway integrated the program with version 4E of C-Kermit and added additional new features, also shown below.

- Long packet support - The cursor with open desk accessories now works correctly - New program icon - New settings files are no longer TEXT - Settings can now be written back to an already existing settings file - Key redefinition function built in to Kermit, no more CKMKEY - Server mode directory listing feature - Multifile (folder) send - Server "Delete" file command - Server "Space" command - Get whole folder content

from the server with filename ":" - Support of menu command keys (key macros) - Terminal settings dialog separated from communication settings - Non-transparent terminal mode - Display of statistics and protocol version to "About Kermit" dialog - Parity problems fixed - More efficient file transfer in many cases, especially when parity in use - Session logging (screen capture) - Transaction logging - Multifinder support - Additions to the VT102 emulator (smooth scrolling, etc) - Rearrangement of menus and displays - Program no longer hangs if remote response window gets too full - Program now works correctly on 64K ROM machines - A new manual.

From: gregoret@cgl.ucsf.edu (Lydia Gregoret)
Subject: **summary (was Emerald City and PostScript)**
A week ago, I and several others posted inquiries about where to find software which will let one view and edit PostScript on the Mac. There are several programs available: Lasertalk from Emerald City and PostHaste from Micro Dynamics. Here are excerpts from replies I have received about LaserTalk. The reviews are favorable.
From: han@apple.UUCP (— Byron B. Han —) Subject: Re: PostScript Programming
....(old posting being replied to included here).....lg
It (LaserTalk) provides (according to the literature)
Line by line interaction with PS executive Real time display of PS stacks/variables On screen previewing of the PS image Multiwindow editor (w/o limit on size), auto format Realtime PS debugger w/ tracing, stepping, and breakpoints Dictionary browser Online access to PS operator descriptions + 150 page manual.
This is directly from the brochure. I have not used it.
This information is provided for informational purposes only. This is not an official Apple endorsement or review.
Hope this helps. It looks REALLY neat. Finally a REAL PS development environment! Price is suggested retail price $249 and is copy protected. Non copy protected version available upon return of registration card.
From dbeck@unix.SRI.COM Fri Jun 3 07:49:06 1988
I have a copy of Lasertalk running on my Mac II/Verityper VT600. Many nice features and works well. Permits you to prevue PostScript program output on the Mac before doing a print. Provides realtime debugging of PostScript, editing features and onandon.
Emerald City Software 97 Jennings Lane Atherton, CA 94025 (415) 368-8303
Your initial disk is copy protected, but when you mail in the registration you get an unprotected version (with your ident encrypted therein). Nice people to talk to and a good product (opinion).
From adobe!baffico@decwrl.dec.com Fri Jun 3 11:09:11 1988
Emerald City's LaserTalk allows for an interactive session with a PostScript device. The onscreen representation or "preview" is generated by the PostScript printer. Personally, I think it is a great product and use it myself...
From: mday@cgl.ucsf.edu, personal communication
PostHaste by Micro Dynamics, Ltd. — as advertised in MacTutor, April 1988
from the ad: "PostHaste is a complete PostScript programming environment for the Macintosh: *includes an integrated multiwindow editor *uploads and captures error messages without leaving the editor *interactive over AppleTalk *many 'cookbook' examples *no 32K file limit
$59.95 plus $3.00 shipping USA and Canada, $6.00 elsewhere.
Micro Dynamics, Ltd. 8555 Sixteenth Street, Suite 802-T Silver Spring, MD 20910 (301)-589-6300"
I have not used it.

From: M Sewall <SEWALL%UCONNVMB[illegible]@forsythe.stanford.edu>
Subject: **Vaporware — Fan the flame; send rumors!**
VAPORWARE, Murphy Sewall, From the June 1988 APPLE PULP, H.U.G.E. Apple Club (E. Hartford) News Letter, $15/year, P.O. Box 18027, East Hartford, CT 06118, Call the "Bit Bucket" (203) 569-8739 Permission granted to copy with the above citation

Premature. Even in a business where vaporware is a way of life, Tandy's surprise late-April announcement of the 550 Mbyte THOR-CD (Tandy High-Intensity Optical Recorder Compact Disk) rewriteable laser disk technology has been widely criticized. Tandy's announced release date for an audio recorder version (at less than $500) of 18 to 24 months in the future already is regarded as optimistic, and a CD ROM version (at a considerably higher price) isn't expected before 1991, at least. - PC Week 26 April and 17 May

Optical-Magneto for Fall 1988. Maxtor, of San Jose, California, already has demonstrated two hybrid magneto-optic large capacity data drives which it plans to offer for sale this October. The 160 Mbyte "Fiji" will retail for $1,995 and disks will be priced at $85. The gigabyte "Tahiti" will have an access time nearly three times quicker than the Fiji with a price tag of $5,995 and $250 disks. Sharp will introduce a 380 Mbyte SCSI magneto-optical drive early next year. - PC Week 17 May and InfoWorld 16 May

Look Ma, No Coprocessor. VM Technologies, a Tokyo-based joint venture of several Japanese PC companies, is designing a "breakthrough" CPU that will be able to emulate more than one competing 32-bit CPU. VM claims to have pioneered a technique based on programmable logic arrays (PMAs) which will allow processor emulation microcode to be downloaded. The VM8600S will then be able to execute instructions in a manner identical to the emulated CPU. VM is expected to ship sample quantities of the VM8600S by the end of this year. Manufacturers could use the chip to develop a microcomputer capable of being both a Macintosh and PS/2 (80386) clone. - PC Week 17 May

Clone in Mac Clothing. Six different Asian computer manufacturers are said to have developed Macintosh clones which are awaiting copyright clearance for their ROMs. In the meantime, a few are making MS-DOS PC clones available in the Mac lookalike cases. - Random Access 14 May

Latest IIgs+ Rumors. San Francisco AppleFest in September may be the time when a faster version (with 1 Mbyte of memory standard) of the IIgs (already rumored to be in the hands of select developers) will be announced. Perhaps not, as rumors persist that some very senior Apple marketing managers want

to deep-six the whole idea and concentrate as much energy as possible on the Macintosh line. The introduction of the Apple CD ROM creates a problem for Apple's current ProDOS operating system which is unable to address a device with more than 64 Mbytes (two 32 Mbyte volumes). The fix is said to be ProDOS/16 HFS which will port the Macintosh Hierarchical Filing System (HFS) to the IIgs. As a side benefit, the IIgs will be able to read and write disks in the Macintosh format. A mid summer intro for the new ProDOS/16 is possible. - Pro-Carolina.CTS (BBS) 6 May

The Alternate Interface. IBM has signed an agreement with Metaphor Computer Systems for a joint development of a new software interface using graphics and icons. The joint-venture might be a way to avoid dependency on Microsoft's Windows technology which is the subject of litigation by Apple. - Random Access 30 April

Tomorrow and Tomorrow and Tomorrow. Although some industry rumor mongers tout "NeXt month," as when Steve Jobs oft' rumored workstation will debut, others point out that software developers who had been planning demonstrations at this month's PC Expo have been told the machine will not be available. Odds are quoted at 9 to 5 that NeXt will not survive 1989 and 4 to 1 on 1990. - PC Week 19 April and 3 May and InfoWorld 16 May

Sun Rise. More than 100 software companies have announced Unix versions of existing PC programs, including Lotus 1-2-3, that will be able to run on Sun's new 386i workstations. - PC Week 19 April

Color LCD. Hitachi demonstrated a working color LCD display at Comdex last month. A ten inch laptop version is expected to be offered for sale within 18 months. No price estimates are available at present. - PC Week 17 May

Video Capture. Data Translation will offer an add-in card for the Mac II in July that allows users to display live-motion color video images. Called the Colorcapture, the 16-bit color card will display 640 by 480 pixel resolution in 32,768 colors. The product is intended for video production and advertising applications and will be priced at $2,995. - InfoWorld 9 May

AT Coprocessor for the Mac II. Perfectek Corporation has announced an AT coprocessor board for the Mac II for August shipment. The board will have a 12.5 MHz one wait-state CPU, 1 Mbyte of RAM, and IBM compatible parallel and serial ports. The price is expected to be about $1,500 (subject to fluctuating DRAM prices). - InfoWorld 16 May

Multiprocessor Workstation. In response to an Air Force RFP (Request For Proposals), Zenith is developing a 15 MIP computer expected to use as many as five 25 MHz Intel 80386 processors. The operating system will be a custom version of Unix V. Commercial versions of this workstation are expected to retail for "considerably less than $20,000." - PC Week 17 May

Faster Macintosh II. The good news is that a single DMD 29000 coprocessor add-in board from Yarc Corporation will make a Mac II capable of 17 MIP performance and that four such boards could boost speed to as much as 68 MIPS. The bad news is that the coprocessor does not run standard Macintosh software. Yarc already is working with developers to write graphics programs and other processor intensive applications for the board which will be shipped with 2.5 Mbytes of RAM and will retail for $4,295. - InfoWorld 9 May

Power in the Next Decade. Data General and Motorola have announced a joint development pact to produce a 100 MIP computer using a version of the new Motorola 88000 RISC chip series (see the April and May columns) by 1991. - InfoWorld 25 April

New Laptop Technology. In six to nine months NEC will be ready to market an 80286 laptop computer weighing only 6.5 pounds. Meanwhile, Sonic Electric Energy of Atlanta has announced a revolutionary new method of converting radio waves into electrical energy. The company says they are developing a laptop computer that will be powered by radio waves and won't need a battery. - PC Week 17 May and Random Access 30 April

HP's Printer Control Language (PCL). Hewlett-Packard marketing manager Bill McGlynn is quoted as saying that the PCL language used in the firm's popular Laserjets will not be upgraded to compete with Adobe's Postscript. The next version of PCL, Level 5, is scheduled for shipment this Fall. Level 5 will mimic some of the popular features of Postscript but will fall far short of Postscript's high-end functionality. - InfoWorld 25 April

Laser Typesetter. Lasermaster Corporation plans to begin shipping a 2,400 dots per inch laser typesetter within the next two months. The LM-Typemaster will incorporate drivers for Ventura Publisher and Aldus Pagemaker, making it possible to produce high-quality, camera-ready output with PC desktop publishing software. The printer will have 4 Mbytes of RAM upgradable to 8 Mbytes and will cost approximately $30,000. - InfoWorld 25 April

Microsoft's Macware Plans. Microsoft has plans to enhance the firm's entire line of Macintosh software during the next 12 months. Word 4.0 will include full WYSIWYG, enabling on-screen document editing. A revision of Excel will be along by the end of the Summer with 48 new worksheet functions and 29 new macros. A later version of Excel will support 3-D charts and up to 4 Mbytes of memory. - InfoWorld 18 April

Disclaimer: The "look and feel" of this message is exclusively MINE! subject to change without notice; void where prohibited)

Murphy A. Sewall School of Business Admin. University of Connecticut

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Info-Mac digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.

Usenet is a loosely-coupled network of co-operating academic and commercial computer systems. It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.

Delphi is a commercial timesharing and bulletin board system. The Delphi Digests are made available thanks to Jeffrey Shulman of Rutgers University.

ComServe

The utility program which allows the sharing of serial devices over an AppleTalk network - by Irene Flaxman

ComServe is the latest offering from InfoSphere, following on from MacServe and LaserServe - although its use is not dependent upon any other software.

ComServe is a utility program which allows several Macintosh users to share serial devices over an AppleTalk network. We tried the software using a Macintosh Plus and a Macintosh SE, sharing a modem and an ImageWriter II printer. The software was easy to install and use, and worked effectively.

Minimum system requirements are quoted as:

Macintosh 512k
800k disk storage
Serial device
AppleTalk connectors
System 3.2 or later
Chooser 2.3 or later
Finder 5.3 or later

In order to install the software, simply drag the ComServe icon into the system folder of your startup disk and re-boot the system. This makes the ComServe utility available, so that the Macintosh (workstation) can send output to a serial device which is attached to the ComServe server's modem port. Installing the server software is just as simple, but requires that you drag over an additional ComServe server icon into the system folder of your startup disk before re-booting the system.

Each ComServe package will allow you to set up any number of startup disks for Mac workstations, but only one startup disk as a ComServe server. The Macintosh which is booted with this disk should have a serial device attached to the modem port, and it will be used to control the facilities available to other users over the network. The serial device may be a printer, a modem or a plotter. If you want to share several devices in this way, it will be necessary to attach each to a ComServe server, and you will need to purchase a separate software package for each server.

To activate ComServe from one of the Macintosh workstations, you use the Chooser as normal, but you'll find an extra icon for each ComServe server - so it makes sense to give each server a meaningful name! Selecting a server allows the remote Macintosh to access the serial device attached to that server. Having done this, the use of ComServe is quite transparent to the user, although it may be necessary to queue for use of a serial device if others are using it also - this is not a spooler program, and it will not reduce the waiting time.

In order to minimise this waiting time, the server may be set to automatically disconnect a workstation if it is idle for a certain length of time (the server can actually set the time limit, too). Another feature is that a message will appear on the screen of the remote workstation, if the serial device it is connecting to is not a printer - quite useful, if the machines are in different locations!

As with any network, the server has more facilities than the other workstations - e.g. it can be used to define idle time or to check current users. A password can be assigned, to prevent the unauthorised use of the server facilities if necessary.

I feel that one of the nicest features is that the server is not "dedicated" to the task. The software works in the background, so that the Macintosh which is being used as a server is still available for use as a word-processor or whatever else you might wish - you can output to the serial device which is attached directly toits serial port, or to any other serial device on the network.

I found the documentation easy to read, and it covered all the obvious points. The Release Notes include several lists of hardware and software which have been tested for compatibility - two of these lists have been reproduced, below. The installation and use of the software was easy, so that I felt it represented good value overall for an installation which has a number of Macintoshes but does not wish to duplicate purchases of peripherals.

Distributed by P&P Micro Distributors Ltd. Available from Apple dealers at £170 + VAT.

Hardware

ComServe™ has been tested as a server for the following serial devices:

Vendor	Product	Notes
Apple Computer	ImageWriter I	
Apple Computer	ImageWriter II	
Apple Computer	ImageWriter LQ	1.0B3 drivers
Apple Computer	Personal Modem	
Avatar converter	MacMainFrame DX	Protocol
Hayes	Smartmodem 1200	
Hayes	Smartmodem 2400	
Altos	Direct connect to minicomputer	

Communications Applications

The following communications applications are fully compatible with ComServe™ 1.0:

Vendor	Product	Version
Apple Computer	AppleLink	4.0
Apple Computer	HyperCard	1.0.1
Harry Chesley's	HyperTerm	?
Dow Jones Software	Desktop Express	1.0
Dreams of the Phoenix	FreeTerm	2.0
FreeSoft	Red Ryder	9.4
Software Ventures	MicroPhone	1.0

MacSoft

Bridge House • Wellington • Somerset • TA21 0AA
Phone 082-347-3625 or 5834 • FAX 082-347-3477

Phone lines open from 10.00am to 6.00pm, Monday to Friday. UK postage: £2.00, but post-free for orders over £100 (1st class recorded post). Overseas postage: 5% of order value. Pay by Cheque, Access, Amex or Visa. V.A.T. is not included; please add when placing UK orders. Product pricing and availability subject to change without notice. Foreign orders welcome. E&OE.

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SOFTWARE

	List Price	MacSoft Price
•Adobe		
Illustrator '88	£450.00	£375.00
•Altsys		
FONTastic+	£74.95	£45.00
Fontographer	£375.00	£249.00
•Affinity		
Tempo	£90.00	£59.00
•Center Point Software		
Copy II Mac	£39.95	£22.00
•Claris		
Macdraw 2	£325.00	£289.00
MacProject 2	£395.00	£355.00
•Computer Label		
MacBarcoda	£330.00	£299.00
•Cricket Software		
Cricket Draw	£295.00	£199.00
Cricket Graph	£175.00	£127.50
Cricket Presents	£495.00	£395.00
•Data Tailor		
Trapeze V2	£295.00	£175.00
•Icon Technology		
MacAuthor	£199.00	£115.00
•IDD		
MacDraft	£245.00	£165.00
•Living Videotext		
MORE	£195.00	£149.00
•MacroMind		
Maze Wars+	£49.95	£34.50
VideoWorks II	£195.00	£145.00
•MicroSoft		
Basic (Cmp.)	£150.00	£99.00
Basic (Intrp.)	£75.00	£60.00
Chart	£95.00	£70.00
Excel	£395.00	£199.00
File	£150.00	£99.00
Flight Simulator	£45.00	£35.00
Mail 1-4 users	£195.00	£149.00
Mail 5-10 users	£345.00	£249.00
Mail 11-20 users	£495.00	£349.00
Mail 21-32 users	£645.00	£499.00
PowerPoint	£295.00	£199.00
Word V3	£295.00	£199.00
Works	£295.00	£149.00
•MindScape		
Balance of Power	£26.95	£19.50
Champion Bxing	£26.95	£19.50
ComicWorks	£69.95	£49.50
Deja Vu	£26.95	£19.50
GATO	£26.95	£19.50
GraphicWorks	£99.95	£54.50
Orbiter	£26.95	£19.50
ShadowGate	£26.95	£19.50
Uninvited	£26.95	£19.50
•Nashoba Systems		
FileMaker Plus	£295.00	£159.00
•Quark		
Xpress	£695.00	£499.00
•Silicon Beach Software		
Acc. Pak 1	£29.95	£15.00
Airborne!	£24.95	£17.50
Apache Strke	£34.95	£27.50
BeyondDarkCstl	£34.95	£27.50
Dark Castle	£34.95	£27.50
Dig.DarkRoom*	£195.00	£145.00
Ench. Sceptres	£24.95	£17.50
Silicon Press	£54.95	£37.70
Super 3D	£195.00	£145.00
Sup 3DEnhncd*	£325.00	£245.00
Superpaint II	£99.95	£99.00
World Builder	£49.95	£37.50
•Software Concepts		
Computer Atlas	£49.95	£35.00
•Software Supply		
Power Station	£59.95	£44.00
Suitcase	£59.95	£44.00
•Symmetry		
ACTA	£54.95	£39.00
HyperDA	£59.95	£44.00
PictureBase	£74.95	£39.00
•MacAmerica		
Scoop	£445.00	£310.00
•T/Maker		
Click Art	£49.95	£30.00
C/A PostScript	£129.95	£85.00
WriteNow II	£125.00	£119.00
•Think Technology		
Capps Prme	£49.95	£37.50
HFS Navigator	£39.95	£27.50
inBox	£350.00	£235.00
LaserSpeed	£65.00	£42.50
L/S Office	£325.00	£225.00
LightSpeed C	£115.00	£90.00
LightSp Pascal	£85.00	£69.00
•Turner Hall Publishing		
MacSQZ!	£65.00	£52.00

LASER FONTS

	List Price	MacSoft Price
•Adobe Typefaces		
Helvetica Cond., Univers, Futura Cond. Memphis Light *each are*	£302.00	£265.00
ITC Frank Goth, Univers Cond, Futura 1 & Med, Stones,Eurostile *each are*	£227.00	£195.00
Sonata, Carta and Park Avenue *each are*	£75.00	£60.00
All others	£150.00	£125.00
These are prices for single printers. For multiple printers, prices are approximately twice single prices. Call for details.		
•Casady		
Fluent LaserFonts	£69.95	£42.50
•Postcraft		
Laser FX	£155	£139
•Software Complement		
Compl. Type	£79.95	£49.00

HARDWARE BARGAIN OF THE MONTH

RODIME

EXTERNAL	INTERNAL "RX" For Mac II and SE
S20+ (20Mb) £385	
S45+ (45Mb) £525	RX..
S60+ (60Mb) £575	450 (45Mb) £475
S100+ (100Mb) £845	600 (60Mb) £575
S140+ (140Mb) £995	1000 (100Mb) £775
S540+ (540Mb) £7995	1400 (140Mb) £945

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HARDWARE

	List Price	MacSoft Price
•Memory (RAM) Upgrades		
Add 1Mb to Plus		£275
Add 2Mb to Plus,SE		£598
Add 4Mb to Plus,SE,II		£1196
•Insignia Solutions		
Soft PC Mac	£395	£345
•Irwin Tape BU		
40Mb	£985	£895
80Mb	£1280	£1195
•Orange Micro		
Grappler Mac	£85	£75

Cables

PhoneNet	call
Apple(Local)Talk	call
Printer	call
SCSI	call

**As soon as available.*
†Unless program not yet released, discontinued, or sale subject to cheque clearance.

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UK Atlas: Roads,rivers,railways,airports,counties,cities etc (Inlcuding London Underground map)

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Now you can print in 9 grey shades on your LaserWriter!

Each package contains nine different grey shades for the Laser font you want. GreyFonts available include: Times, Helvetica, Avant Garde, Bookman, N Helvetica Narrow, Palatino, Symbol & Zapf Dingbats. All the usual style options available, such as Bold, Italic, Underline, Outline, & Shadow.

1 GreyFont costs £49; 2 cost £94; 3 cost £134; 4 cost £169; 5 cost £199; 6 cost £224; 7 cost £244; & all 8 cost £259

GhostFonts

GhostFonts allow you to print LaserWriter fonts as backgound, or shaded text without outlines.

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Bill Pearce's review of *Alpha*Pop has generated comments:

Thank you for printing Bill Pearce's review of of our product AlphaPop (Apple2000, April 88). A couple of points are worth making in response:

Bill seems to be very down on AI (though that is by no means the only use for Pop-11) because its techniques are poor relative to the capacities of the human mind. Of course this is true, at least at the moment, but it is worth remembering that the purpose of AI is to test out theories about how the mind operates: if the results are poor, and often they are surprisingly good, then that tells us whether or not we have a good theory. Without computers and AI languages this kind of theory testing would be virtually impossible and we would be back to the situation where all theories were equally good because untested.

One interesting side-effect of this theory testing is that we often produce theories in the form of programs that behave differently to human beings. The route planning program discussed in the article is a prime example. Most people will do what Bill suggests: they will plan a route visually. The program using non-visual search techniques works differently, but in my experience is often surprisingly ingenious, suggesting good routes that certainly would not have occured to me. It would be possible to build a visually guided route planner but we have left that as a (difficult) exercise for the reader.

People outside the AI community may still find that AlphaPop is worth a look. Dick Pountain (Byte May 88) found it was the richest and most expressive language he had ever seen. In this sense the comparison with Logo is a bit unfair since most implementations of that language are exceptionally weedy in terms of programmer's facilities. AlphaPop on the other hand has over 350 built-in procedures and supports 20 built-in datatypes. Of all the languages in its class Pop-11 is the only one that has been specifically designed to be easy to learn and conventional in appearance: the syntax looks something like Pascal or Modula. We use it in-house for everything from formatting mailing labels to accounting.

On the technical side there are a couple of things we failed to get across in the documentation: there is a single procedure called 'dataword' that will return the type of any object so using all the specific procedures 'islist' etc. is not necessary: characters are in some sense the same as certain numbers simply because that is the way that ASCII, and the Macintosh planned it; the concept of a distinction between equality and identity is a useful one that occurs in many languages, two copies of the same item are equal but not identical because it is possible to change one without changing the other.

Lastly, a plea on behalf of all software developers: if you ever have any difficulties working with the products you have bought please call for assistance. Most of us are only too delighted to provide it and it is really the only way for us to find out how to improve our products. In Bill's case a quick call would probably have saved him some time and effort.

Best Wishes,

Alex Morrison, Cognitive Applications

I am happy to accept the points made by Alex Morrison (this issue), especially regarding the richness and expressiveness of Alphapop. I was similarly brusque in reviewing LPA MacProlog - mainly through trying to say too much in too few words. The few brief points I wish to discuss here are to do with some of the basic premises of AI and are not aimed at Alphapop or MacProlog.

The relation of mind to computer is of vital importance to programmers and at least of passing interest to all computer users. Crucial to this issue is the problem of 'meaning' (the meaning of words / language). Linked to this is also the question of whether the mind is a machine - Professor Marvin Minsky categorically states that it is, and a mere six months ago I should have agreed with him. But let us concentrate on 'meaning'.

The mind invests words with meaning in a way in which a machine cannot. You know what a spade looks like, feels like, tastes like (yes, as a baby you explored what everything you could lay your hands on tasted like until you realised that most things just taste nasty). You also know from experience what a spade is normally used for and what it could be used for. This composite picture of spade has nothing to do with language: it has to do with exactly where spade fits into your picture of the world around you. In computer terminology, the word now serves as a pointer to some aspect of the world of your experience. No word has any meaning to you unless you can create such a link.

Someone now asks you to define a spade. You very soon realise that there is no real substitute for actually seeing and handling one. If the questioner is familiar with a shovel then you can get pretty close. But think clearly about what we are trying to achieve with this definition. We are not really saying that 'spade' = 'shovel'. We are not even saying 'spade' = 'very full definition of spade'. These are logical nonsenses. What we are really trying to do is fill in the gap in this person's experience of the real world. That is to say, we are not trying to link the word spade to its definition but to what it actually represents in the world of experience. Incidentally, on the matter of defining a word, it has even been recognised by some philosophers (they are notoriously cautious on these matters) that it is not possible to exhaustively define a word in terms of other words. The real point is that 'definition' is not 'meaning'. The 'definition' is an attempt to find an alternative pointer to the real meaning

Let us now go one step further. Suppose your best effort fails to produce a definition that can relate to any previous experience. We now have a definition that effectively says 'GOBBLEDEGOOK' = 'BALDERDASH'. Both words point at nothing at all! Now the computer is always in this position. How is it ever going to relate any word to its experience of the real world'? Clearly all language statements are gibberish to a computer. It is word blind. This is hardly suprising seeing that it is also number blind.†

AI programmers are not so naïve as to think that the computer does have this understanding. What concerns me is that they are more prone to downgrade our mental capacity to that of a computer, which is of course nil. Although they do not claim to know how the mind works, they nevertheless make assumptions about how it works that are totally unjustified. That is a long story that I will not elaborate on here. Failure to recognise the non-mechanistic capabilities of the mind is actually hindering our understanding of it and at the same time encouraging totally unrealistic expectations of the eventual capabilities of a computer. The consequent wastage of human resources has now reached monumental proportions.

I trust I have shown how words have meaning for the mind that they cannot possibly have for a computer. No analyst likes to leave a job half finished.

There was the problem of 'instant recognition'. How on earth do we manage to recognise words, or anything else for that matter, instantly? That was a much more difficult nut to crack. We clearly don't do a 'search and find'. When the truth dawned I couldn't believe it. Nor would you. Sadly, if I were to tell you the answer, you would think me as nutty as a fruitcake. So I will keep mum and claim the benefit of the doubt. All my spare time is now devoted to writing an account of the solution to this problem in a form that is understandable. Even then, no-one will believe it.

† *This may not be immediately obvious. The computer will accurately compute, but it does not know what to compute. You know what to compute (i.e. what computations are valid) but you are a most incompetent computer.*

Bill Pearce July 1988

HyperEasy

Irene Flaxman tries out the new HyperCard training course from Personal Training Systems

HyperEasy is a new title in the self-teach series of tutorial courses published by Personal Training Systems. The HyperEasy course consists of four training modules currently, although there is mention of a further (more advanced) module to come. Each module uses an audio tape and sample disk to teach you how to use HyperCard.

Other titles include:

LearnMORE (3 modules)
MasterWorks (3 modules)
PageTutor (4 modules)
LearnWord 3.0 (3 modules)
Excellerate (8 modules)
Learn '88 (4 modules)
MacTeach (4 modules)

They are adding to the list all the time, allowing Macintosh users to learn how to use their new software to the best advantage in the shortest time.

Many users prefer to simply try out facilities without any sort of training, but there's always a risk that you won't use the software most efficiently, then. Others like to read right through the full software manuals, but I suspect that most of us would find that very tedious. These courses provide an alternative method of learning, and the cost seems small when you consider that training can greatly increase efficiency - and, in a business environment, the courses may be used by many personnel.

The concept is simple. The facilities of the software are split into manageable chunks, a practice disk is created to provide examples of how to use the software, a reference card is designed, to summarise the facts learnt during the course, and an audio tape is recorded to guide you through the various facilities. Courses are taken at your own pace, so that you are able to review any parts which may not be clear; and they are conducted in the privacy of your own home or office - so you are free to make mistakes and to learn from them!

In all cases, you must have already purchased the appropriate software package. The practice disk includes sample files, but not the software. Whilst working through the examples, you use the actual software, so that any mistakes you might make will be handled by the software in the normal way - but, everyone says that we learn by our mistakes!

The HyperEasy course comes in four parts, to take you from the simplest concepts of using HyperCard through to advanced scripting techniques. Topics include creation of stacks and buttons, finding or sorting data, writing scripts to perform specific tasks, etc. Although the four courses provide a good grounding for creating your own stacks, there is more to come - addressing the more complex programming problems.

Each part should take about 90 minutes to complete, dependent upon the speed at which you work. The audio tape guides you through facilities whilst using the software to modify the data supplied on the sample disk. There are times when you are asked to turn off the tape recorder, while you complete separate exercises without this step-by-step guidance, and it is worth the effort to work through these. HyperEasy is quite an intensive course, as there is a lot to cover. HyperTalk is a programming language in its own right, so it is quite an ambitious project to undertake on a self-teach basis.

I think of HyperCard as something of a phenomenon - it really caught the imagination of all users, as soon as they saw it. I have not made the time to learn much about it, previously, so I was more ignorant of its facilities than many Mac users.

I worked my way through all four courses, and found them easy to follow. They have given me a good basic knowledge of HyperCard and its facilities, which now needs to be built upon. There is no doubt in my mind that this type of package can help you gain a basic understanding, but you must recognise that you need to use your new knowledge to capitalise on the investment of time required to complete the course.

The examples included on the disks are plausible, so that you can easily relate to them. The same example is used for several lessons, as the courses delve deeper into the facilities. Thus, understanding is built up in small steps but they are logical steps and easy to follow.

There is little written documentation provided, as the courses rely upon the audio tapes and sample data for documentation.

I was surprised that Personal Training Systems would be so ambitious as to teach a programming language by this method, but it works! My only suggestion would be for the inclusion of a reference card with the more advanced packages - we are advised that we must not use any of the HyperTalk reserved words for naming fields or variables, but a list of such reserved words would be useful.

The courses have a recommended retail price of £39.95 each, but I feel that for many users they would be a good investment. The UK distribution arrangements seem to be changing currently, but you should be able order these training courses through your local Apple dealer, or write directly for details to:

Personal Training Systems, P.O.Box 24431, San Jose, CA 95154, USA.

HyperCard™ Info

HyperCard performance, windows and Power User Tips

Hypercard performance analysis with large datasets: Some answers

In a previous message on comp.sys.mac I claimed that Hypercard would probably be sufficient for searching large stacks of the size someone else had discussed, but that I had no hard data to back this up. I promised that I would provide this as soon as I got my system up.

Well, two days ago I dumped 33,327 records out of FoxBase+/Mac into a text file (tab-delimited). This file was 4,497,393 bytes long. (FoxBase took less than two minutes to dump it.)

Importing it to Hypercard was trivial, but it did require a script. Importing _ANYTHING_ into Hypercard requires a script.

Unfortunately, Hypercard crapped out after importing 19,017 records. I don't know why; it said something like "unexpected error 1837". I feel like an idiot for not writing it down exactly, but I was too annoyed at the time. Anyway, importing 19k records took about 4 hours, give or take 15%. The stack size is now 5,283,840 bytes. From these numbers it appears that for fairly normal text, stacks will be roughly twice the size of their straight-ASCII equivalents. Not an unreasonable trade-off, I think.

After the error, I quit and relaunched Hypercard. It gave me an error, saying that the number of cards in the file was 'wrong'. After that, though, there was no problem, so I assume it just detected an error in its internal book- keeping and corrected the problem automatically (it did take a few moments for the disk drive to settle down after the error message).

On to the good stuff... At first I was disappointed by HC's performance. It took about 45 seconds to find a word unique to the 19,017th card the first time (after going there once, re-finds were very quick, undoubtedly due to caching). This is NOT the whole story, however. One very odd thing I noticed was that Hypercard kept my disk drive going all the time. It reacted to user events in a perfectly normal fashion, stopping disk access while responding, and then started seeking on the disk again... It became clear to me that this was normal HC operation, and that I had never observed it before because I never used a 20,000 card stack before.

When I gave it the minute (or so) it needed, it stopped seeking and left the drive alone. After that, searches were *MUCH* faster than I had first experienced. The same find of a unique word on a previously-unseen card (#19,017) took only a few seconds. *ALL* finds were enormously quicker.

There is another factor as well. I know I saw it mentioned some time ago (perhaps by Steve Maller at Apple), and my experience certainly supports it. Hypercard searches using three-letter units. The more you give it, the faster it will find what you're looking for. If you know you're looking for a jazz CD named 'Living in the Crest of a Wave' by 'Bill Evans', Hypercard can find that card if you say 'find "crest"'. It will do so several times faster if you say 'find "liv cre wav bil eva"'. Every word you give it helps it find things faster. I do not know how much effect four-letter-or-larger fragments have on seek times. I expect it is considerably favourable only if there are many cards which are sufficiently close to the find string so that they would be matches if only three-letter fragments were given. This is the least clear of all my guesses, though, and could be totally wrong.

There is a potential problem, however. Obviously all of that background disk access was HC loading pointers (or whatever) into memory, so that when I gave it time to load them all up at the beginning, it was much faster. For 19,017 records, 750K of memory (HC's default MultiFinder partition) was not sufficient to cache everything, and there were no dramatic speed gains. At a partition of 1.0 MB (which is a bit more than you get running UniFinder on a 1MB machine), almost all RAM space was used. So, for ~20,000 records, I guess that HC needs about 300K of RAM over the 750K default to work at its best. Perhaps a 1MB machine will be sufficient for up to 15,000 records? (Note that all these numbers apply to a stack where each record is of approximately the same size as the ones I used. That comes out to about 135 bytes of ASCII text per card, or 270 bytes of stack space per card on the disk.)

All of the tests I performed were on a 4MB Mac II. How does this translate to a Mac Plus or a Mac SE? Probably better than you'd think, as long as the Mac has sufficient memory. What is sufficient? The guidelines above should work as a pretty good rule of thumb. For find commands given more than three words, my Mac II almost always found stuff within two to three seconds

CAVEATS:

1) For stacks with unbalanced word distributions (word X shows up in every card), finding a word group which contains several unusually common word- fragments and one rare one will definitely be slower than if all were rare. In other words, the more unique the words and their combination, the faster Hypercard will be. This seems eminently reasonable to me...

2) Hypercard likes to cache whole cards, I think. Certainly it likes to cache bitmaps. So if you go through many cards in one session, performance may degrade. 'Many' depends on the contents of the cards and the

amount of free RAM you have. I haven't actually tested this, but it seems likely.

3) I don't know if performance changes drastically with the ratio of cards to text in the stack, but I would bet the difference isn't major. Probably it gets somewhat faster with less text per card, net stack size staying the same. I could easily be wrong on this one, though.

4) At all times the command 'Go Card (actual card number)' executed instantaneously. (I would guess that pointers to each card within the file are loaded into memory on startup. At 4 bytes apiece 20,000 cards comes to under 20K RAM).

5) I used version 1.0.1 for these tests. It is known to be much slower than version 1.2 et al. Nevertheless, I don't think that there is any performance difference between the two, in this text-search situation.

6) Version 1.2 is *NOT* the latest version. That honor goes to 1.2.1. This version corrects three bugs in V1.2, the most important of which is V1.2's tendency to crash with stacks over 8000-odd cards (8191?). This might be the fix for my original problem of not being able to import all of the 33,327 lines in my text file (earlier versions shared this bug). Then again, maybe not...

SUMMARY:

For production database work with large datasets, don't even THINK of using Hypercard. In such situations, seek times must be measured in milliseconds, not seconds. For serious database work on the Mac, there is only one choice... FoxBase.

For PERSONAL use of mostly-text stacks up to 4 MBytes, any 1MB Mac should be sufficient for for the job. A decent hard disk is a must, of course. The new fast 30 MB drives, available for ~$650 street, should be plenty. This won't be a speed demon, but if you need to access less than 5-10 cards a minute you should have no trouble whatsoever.

Of course, the faster the hardware, the better it gets...

Any comments, discussions, or corrections to this article are welcome.I make no guarantees about this analysis or the performance of Hypercard. I have no affiliations with anyone. So don't bother them, either...

Alexis Rosen

From: alexis@dasys1.UUCP

This file was downloaded from Usenet.

Windows for Hypercard

Jeff Skastis <skaistis@SLEEPY.CC.UTEXAS.EDU> writes:

>I am trying to write an XCMD that will place a window (or dialog) on top of the regular Hypercard window. I would like this XCMD to plop the window onto the screen and return some sort of ID to Hypercard. The window needs to remain above the Hypercard window at all times, but still let action take place in Hypercard (just like the message box and tool palettes). The window is removed by another XCMD that takes the ID passed from the first.<

I've written a window that does this. It supports multiple, resizable windows with colour pictures, text, or dialogs in them. However, it is rather large and complex, consisting of a large XCMD, a special WDEF, and a system patch. Depending on your needs you might get by with less.

The problems I had were how to keep Hypercard active, how to draw stuff in the window including scroll bars and the grow box), how to detect events in the window and inform Hypercard, how to move, show, zoom windows etc, and how to handle hiding windows when multifinder switched out Hypercard.

I decided to use a patch to GetNextEvent. In another version, I tried using jGNEFilter, but multifinder ignores it (bug or feature?) and when I asked Apple they suggested I stick with the patch. This took care of most of my problems. Most of the actual code, however, resides in the WDEF, not the patch— the patch just dispatches to it.

It turns out that Hypercard stops listening to the mouse when it gets a deactivate event. My hack for solving this problem was to not pass deactivate events to windows that were not my windows or DA windows. Hypercard then remains active all the time. Occasionally there are problems because highlighting in Hypercard's message box remains even though my window is getting keypress events, but basically this works.

To draw stuff in the window, I pass update events to the XCMD and let the window determine what to draw. The window draws structure-like items (scroll bars and grow box) and then whatever other data it has.

To detect events, I take keypresses and mouse clicks and pass them to the WDEF as well. My WDEF has an 'event queue' for each window, plus a mask to determine whether to queue the event. The events are not the same as toolbox events, but a bit more high-level— window moved, window resized, close or zoom box pressed, button pressed, etc. If an event is queued, I post the relevant data to the window's queue (timestamp, mouse location, button id or whatever) then return a function key event via the GNE patch.

Each window is assigned a function key to use for reporting events, this makes it easier for a script to determine which window has the event. My scripts keep a list of window addresses (returned by the XCMD when it creates the window) and the function key is the index of the address in the list. So to complete the reporting of the event, the script, on receipt of a function key event, gets the window address from the list and makes calls the XCMD asking for the next event for that window. The XCMD returns a string representing the 'event record.' Since this is mostly all compiled code, this process is quite fast.

Hypercard is by far the slowest link. I use this to put up confirmation dialogs (using Hypercard's answer command) when the user clicks in the close box of a window.

The XCMD and WDEF work together to handle commanding the windows from hypertalk scripts. The XCMD parses a command string to determine the data to pass to the WDEF, supplying defaults where appropriate (when changing text parameters, for instance, any that are not provided default to their existing values). It builds a record and then calls the WDEF proc passing a pointer to this record rather than an event, and passing a special command code (not one of the existing WDEF codes). The WDEF then takes over, resizing or

scrolling the window, adding or removing gadgets like the zoom and close boxes, tracking the grow box, or whatever.

Hiding windows is handled by the patch, since Hypercard 1.2 has no script handlers for multifinder application switched events. This is currently a hack– I get the head of the window list from a low memory global, build an array of windows, then walk through it hiding all of those that are of my type.

Since hidewindow changes the window list, I can't just walk through the list. Restoring windows is done in the opposite way. Unfortunately, I don't record the previous window array, and Hypercard shows and hides its own palette windows, so I have no way to restore the exact order of windows that existed before Hypercard got switched out.

Anyway, this should be enough info. Stanford owns my window XCMD or I'd post it. Perhaps they will release it eventually. By then, probably Hypercard will support multiple windows. That will obviate most uses of my XCMD except for the color picture, scrolling, and zooming support. Creating windows for Hypercard was remarkably easy, considering how much mucking around under Hypercard I had to do.

Doug Felt
AIR, Courseware Authoring Tools Project Stanford University
From: duggie@jessica.Stanford.EDU

This file was downloaded from InfoMac. Info-Mac digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.

Power User Tips

The following file by Phil Wyman is reprinted from Resources, the newsletter of the San Diego Macintosh User Group.

1. The DoMenu command will execute DA's. For example DoMenu "Calculator".

2. "It" is a local system variable, not a global.

3. "SetCursor" command normally uses the following:-

"Set cursor to 1" = I-Beam
"Set cursor to 2" = crossbar
"Set cursor to 3" = thick cross bar
"Set cursor to 4" = watch
"Set cursor to 5" = arrow or browse tool

4. "Set lockmessages to true" does not work in the message box. This is because "lockmessages" is turned off during idle. Therefore, lockmessages can only be used in a script.

5. If you don't see the menubar on an application, Command-Spacebar will allow you to see and use the menubar.

6. Option-O both in and out of Fatbits will show you where opaque white exists on your card if you are in Paint Tools.

7. Command-Drag sizes (elongates) a selected picture in HyperCard.

Command-Shift-Drag will enlarge and shrink the selected picture proportionally.

8. When you are trying to intercept an arrow key, you must use the message "on arrowkey" with the argument "var.." Then you must see if "var" equals "left" or "right" or "up" or"down." For example:-

```
on arrowkey var
   if var = "left" then exit arrowkey
   go next card
end arrowkey
```

9. If you have to declare many global variables at the beginning of your script, you can declare them in the same line by separating them with a comma. For example, "global var1,var2,var3."

10. You can edit your own patterns in the pattern windoid by double-clicking on them. These changed patterns will stay with the particular stack and not overlap into other stacks.

11. If a user-defined function uses the same name as a HyperCard function, HyperCard defaults to the user-defined function.

For example, if you have a function "average" that you have defined in a stack script, HyperCard will use that function and not its own built-in average function.

12. If you want a miniature picture of a card, you can do Copy Card from the menu, then Command-Shift-V to paste a miniature on your screen.

13. If you want to set more than one text style, you can say: "set textstyle of button to bold,italic" or even to " bold,italic,underline." Also if you want it not to have any textstyle after it has been set to a certain style, you can say: "set textstyle of button to plain."

14. The user pressing Command-Period can stop any script, even if an ANSWER or ASK dialog is on the screen.

15. Double-clicking on a word in the Script Editor or in a field selects the entire word.

16. In a script, you might not know how many levels deep you are in calls to other handlers that have called you. "Exit to HyperCard" will pop you out of all submessages.

17. If you have had trouble getting the name of a card, here's the trick. Go to the card and ask: "get the short name of this card." The short name will give you the name of the card, whereas the long name will give you the entire pathway to the card.

18. "Repeat" or "Repeat Forever" will continue on until an exit repeat or an exit to HyperCard is encountered.

19. In a field, drag with the Command key on a selection of text. HyperCard will put it into the message box, and you can then execute it by hitting return.

20. If the user cancels an "ASK" dialog, HyperCard puts a null into the variable "it." You can therefore check and see if "it" is empty, thereby knowing that the user clicked CANCEL.

21. Once you have set a button to an icon, you can set the button to not have an icon by saying: "set icon of button to zero."

22. Only a locked text field can receive mouse messages such as mouseup, mousedown, mousewithin, etc.

23. Two other characters work as HyperCard operators "greater than or equal" and "less than or equal", as well as the more normal >= and <=. You get these characters by pressing Option-Greater Than or Option-Less Than.

24. You can get rid of your screen altogether by "set visible of cardwindow to false."

25. Functions are not to be defined within message handlers.

From the Macintosh Library

A glimpse of the fascinating artwork from the **Traffic•4K stack on MacLibrary Disk 277 HyperStacks 17.** This stack contains the first part of a science fiction adventure. Let's hope the author completes the stack by producing more artwork of this standard in the future.

An Introduction to MacTel

We asked David Nicholson-Cole to give us some details of the famous BBS

About MacTel.....

MacTel is a primary independent Bulletin Board System in Europe, providing the community of Macintosh users with News, Information and Mail service, and many, many download Files areas and Special Interest Groups for Visitors & Subscribers, on 7 lines.

MacTel runs 24hrs/day, 365 days/year. A specialist Postal Disc Pack Service is available. We also publish an occasional Magazine called "ClipBoard". You can buy a Modem, Hard disk, or other oddments through MacTel. MacTel is independent of Apple, and other User Groups, although has a long standing friendship with Apple2000 and has alsways encouraged members to join Apple2000.

Who uses MacTel?

..... Hundreds of users, many of whom are paid up subscribers, from all professions, and from every country in Europe. People from Apple UK and Apple Dealers, Schools, Polytechnics and Universities, computer magazines, the Ministry of Defence, the BBC, British Telecom, and many others look in regularly for mail, news, chat or files. MacTel London (Metro) contains additional BBS services such as Green Light, TOPSTel, MiracomTel, and London Max.

What do Subscribers get??

Subscribers have access to all the download files areas, and through their contributions they make possible the free News, Information and Mail service to themselves and all new callers. Subscriber funds have already bought most of MacTel's equipment, the remainder is donated or loaned. Further expansion takes place as funds permit. Most new Public domain software is placed in the Subscriber files areas, although a good selection of files are still available to Visitors. Subscribers get reduced subscription to ClipBoard Magazine.

How do I get onto MacTel?

You need any computer with a serial port, some Comms software, a modem capable of at least 300 baud, and a telephone line with a modern BT socket. You need a Macintosh Plus, SE or II or XL computer somewhere, because that is what all our software and news is all about. If you don't manage to get on for a while, get ClipBoard to catch up on the news you have missed.

OK, but what numbers do I ring?

For initial registration, call MacTel HQ (Nottingham, 3 lines), ring 0602-455444. MacTel Metro (London) is on 01-543-8017 (2-lines). MacTel Phoenix (Ipswich 2 lines) is 0473-610139.

The Access Protocols are:- 300/300 (V21), 1200/1200 (V22) 1200/75 (V23), 2400/2400 (V22bis) 8 bits, No Parity, 1 stopbit, Full Duplex. You can get V23 with a modem such as the Pace Linnet or the WS3000/4000 which buffer the 1200 baud outgoing signal to 75 baud. With the VAST size of Sound and Hypercard files the trend to use 2400 is unstoppable.

(Voice Calls for Admin. matters must be made to 0602-810237, or use SYSOP's Mailbox in MacTel HQ (0602-455444).

Keep Trying!

If you don't get on straight away, don't give up! Bulletin Boarding in the early days is always a bit frustrating until you get the hang of it, and learning to download files can be a pain at first. Try small ones first (like DA's and text files) and progress confidently from there!!

Can I use private mail on MacTel?

MacTel has a private mail area, which is of course Free to all callers, including Visitors. Each MacTel node has a local Mail area, and also permits Network Mail. Multi user, Networking software permits you to decide which board to place mail items on, and News is swopped between boards at dead of night.

What does the News contain?

MacTel's News System is so active that it is exported to the USA and Europe, as MACUK. In return we get a regular feed of the Global Mac News area called EchoMac, bringing together English speaking users from California to Canberra. Macintosh, Mac 2, Apple News, HyperCard, Software Developers, Telecomms/Networking, Laserwriter and Hard Disks are all properly covered subject areas. The news is provided by MacTel callers posting up items, asking questions or placing replies. Also, press releases or UseNet extracts that are of interest are edited and uploaded. The MacTel boards talk to each other at night and exchange news and files. ClipBoard Magazine is designed to make some of the news available in a permanent form, edited and illustrated.

What Download Files are there?

A complete list of what we have would not be possible, even at 6point printing, as there is so much, and spread about on so many volumes, and is constantly being added to. Disk Capacity is 150megs on HQ, 30 megs on Phoenix, and 67 on Metro. To summarize some of the titles of files areas :

Information, Texts, Digests, Desk Accessories, Fonts, Applications, Utilities, Omnis 3 Tech Notes, Digests, Artwork - Paint files, Draw and Paint Utilities, Music and Midi Stuff, Video stuff, Educational Stuff, Apple Technical Notes from California, AppleText Stuff from Apple UK, Disabled and Visually Handicapped, Voice synthesis, Sound files, Sound applications, Zap'em all Games, Board Games, Adventure Games!!!, INITs, FKeys, Word Processing, Text Editing, Spreadsheets, Programmers and Developers area, Hard Disk special, Telecomms and Networking, Hypercard Stacks, LaserWriter/postscript files. From the USA - Infomac Digests from Arpanet, Delphi Digests, US Educational Network Digests.

If you are not a subscriber, you can still see what is in the Subscribers files areas by looking whilst on the system, or by getting ClipBoard magazine, in which current directories are printed, issue by issue.

£Subscription Details

Subscriptions run in six month periods, with monthly subdivisions. The sub is £4 per full month till the end of a current period, and £16 for a full six months. Company subs are £6 and £24 respectively. The reason for this is that firms can benefit from tax relief on the subs,group access, free advertising and publicity. Educational Users count as individuals. Call into MacTel BBS for more details, or phone the voice line [illegible]

UK subscribers, these figures need 15% VAT on all payments. Non UK, please use Eurocheques or Bankers Drafts in GBP and leave out the VAT.

About ClipBoard...

ClipBoard magazine is the printed Magazine from MacTel. MacTel's News area is so extensive and valuable that we like to share it with you! Clipboard comes out about four times a year, and contains the best of the News, Advice, Software Reviews, Gossip, Info, Artwork and Technical Notes from the previous few months. ClipBoard is all about the Macintosh and Macintosh people, artworked with loving care, delivered to your door!

Rates of Subscription (No VAT):
£1.95 per issue;
£12.00 6 issues (1 year) by post;
£10.00 6 issues to MacTel or Apple 2000 subscribers by post;
Non UK Readers, please add £3.60 to the subscription for postage.

Sysops:	Associates, Co-Sysops, Helpers:	
David Nicholson-Cole	Michael Brodie	Peter Tootill
Paul Beaumont	Sak Wathanasin	Paul Russell
John Lockwood	Yorick Phoenix	Nicholas Fegen
	Sally Nicholson-Cole	Philip Bath
	and many others.	

MacTel Bulletin Board / ClipBoard Magazine

[illegible]

Macintosh Books

A somewhat personal choice of a few of the latest Macintosh books

The following are brief notices of books we have purchased recently and as such represent our own personal interests in the Macintosh field.
Perhaps time may become available for fuller reviews of some, or all of these, but in the meantime extracts taken from the back covers will have to suffice for short details of the contents.
I have given the dollar price where I have forgotten the English price.

Author: Scott Kronick
Title: MPW and Assembly Language Programming
1987: Howard W. Sams
336pp: @£20.95.

"....This clear, concise introduction will help you understand how to develop assembly, Pascal, and C programs using this fascinating environment. Never before have the fundamentals of assembly programming been explained as meticulously and thoroughly....".

Author: Dan Weston
Title: The Complete Book of Macintosh Assembly Language Programming
1987:Scott, Foresman and Company:
568pp: @$25.95

"....shows you how to • use the 68000 Development System, its Editor, Assembler, and Linker •construct programs with over 400 ROM subroutines • open windows, use dialog, and write desk accessories •draw with the QuickDraw routines • create your own unique icons.. and more....".

Author: Danny Goodman
Title: The Complete HyperCard Handbook
1987: Bantam Books
720pp: @£27.95.

"....The first half of the book reveals every shortcut and undocumented feature Goodman knows for HyperCard browsing, graphics and authoring. The second half gently leads you into HyperCard's comprehensive programming level and the HyperTalk language....".

Authors: David A. Niguidula, Andries van Dam
Title: Pascal on the Macintosh, A Graphical Approach
1987: Addison-Wesley
686pp: @ £24.95.

"....combines a thorough discussion of programming in Pascal with the distinctive program development tools of Macintosh Pascal and Lightspeed Pascal and the basics of interactive computer graphics....".

Authors: Tony Bove, Fred Davis, and Cheryl Rhodes
Title: Adobe Illustrator; The Official Handbook For Designers
1987:Bantam Books
315pp: @£19.95.

"....present step-by-step instructions for creating high-quality line art, halftones and blueprints on this state-of-the-art system....".

Author: John Scully, with John A. Byrne
Title: Odyssey: Pepsi to Apple
1987:Collins
450pp: @£15.00.

"In Odyssey John Scully reveals many of the marketing and management insights he gained from his unique vantage point....".

Author: Glenn C. Reid
Title: POSTSCRIPT® Language; Program Design
1988:Addison-Wesley
224pp: @$22.95

"....here is the definitive guide to designing efficient PostScript programs....is a companion volume to the two other books written by Adobe Systems.... ".

Author: Scott Knaster
Title: Macintosh Programming Secrets
1988:Addison-Wesley
368pp: @£21.60.

"....• use color in the new Macintosh II • set up applications to work with mouse clicks and keystrokes •quit applications and go directly to new ones • manage printing and special features of the LaserWriter • fully utilize QuickDraw and Color QuickDraw graphics routines • manage windows ....".

Author: Dan Shafer
Title: HyperTalk™ Programming; Includes Version 1.1
1988: Hayden Books
546pp: @£18.95.

"....It covers every command, function, property, and operator of HyperTalk., along with basic concepts, detailed instructions, and easy-to-follow examples. ....".

Author: Carol Kaehler
Title: HyperCard™ Power; Techniques and Scripts
1988:Addison-Wesley
435pp: @£15.95.

"....includes step-by-step tutorials to show you how to:
• use pictures,buttons, and sounds to enhance your stacks •copy and paste buttons and sounds •write scripts to link buttons, include visual effects, sort cards, and more • use FatBits to work on fine detail in Paint documents • import and export text to and from other applications....".

Author: Paul Pritchard
Title: An Introduction to Programming using Macintosh Pascal
1988:Addison-Wesley
572pp: @£15.95.

"....This book is aimed squarely at Computer Science students who are taking an introductory course in computer programming, where the language is Pascal and the computer is the Apple Macintosh....".

Authors: Keith Mathews and Jay Friedland
Title: Encyclopedia MAC® ROM
1988:Brady 902pp: @£26.05.

"....It covers more than 700 routines that will streamline your code and help you take advantage of all of the Macintosh's features. Each ROM trap has an individual entry, with-
• Names •Aliases • Managers • Descriptions • Pascal Prototypes • C Calling Sequences • Assembly Language Codes....".

Apache Strike

Ceri Fisher reviews one of the games published by Silicon Beach Software (courtesy of MacSerious Company)

"At ease, men."

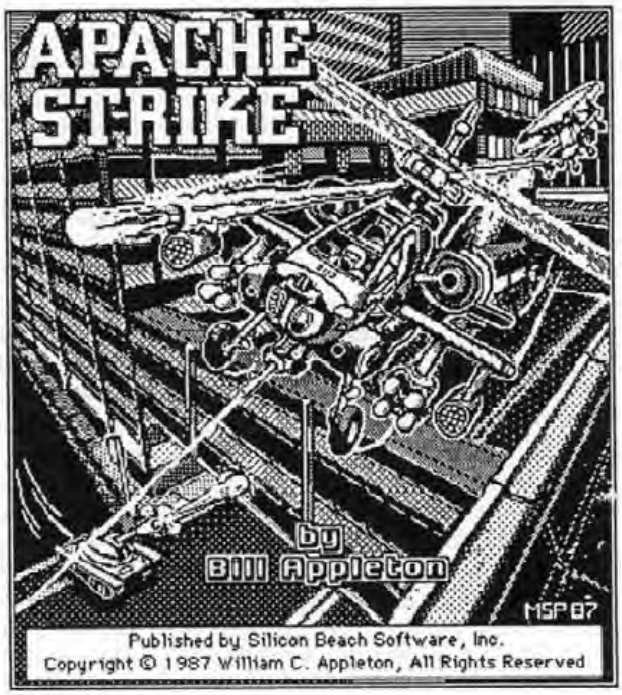
"Now listen carefully y'all, because our friends Silicon Beach Software have a new game in the best American tradition, and these guys know a thing or two about the American dream and how to defend it."

Apache Strike is indeed a very exciting, well-constructed game. Your chopper zooms through a perspective view of blank slab-like buildings, as enemy forces (helicopters and tanks) attempt to stop you reaching the target, of which there is one in each of the 40 different 'cities' (although they all look alike!). The images of these enemies are realistic enough, considering they are only visible for a short time (and you have plenty else to think about once they appear). Generally, the graphics are probably as good as they can be (for the smaller Macs) and give a realistic feel to the flying action view from the cockpit - packed with useful instruments (unlike a flight simulator?).

Apart from the annoying tune (not as good as the "Valkyries" in Airborne), the sound effects are very good (you can even hear shells hitting rotor-blades), and a computer co-pilot with a female voice gives you help and encouragement ("Good Shot." "Bearing Display Damaged." Thanks a lot!). I like the sound of a novice flyer getting "All Systems Go" followed by a crash several times in quick succession. Manoeuvring is authentic (an enemy behind will overfly you if you dive then climb), but the helicopter is difficult to fly at first, which helps the game to be more enjoyable in the long run. However, your helicopter can't hover or even change speed - which is unfair because the enemy heli's do it all the time!

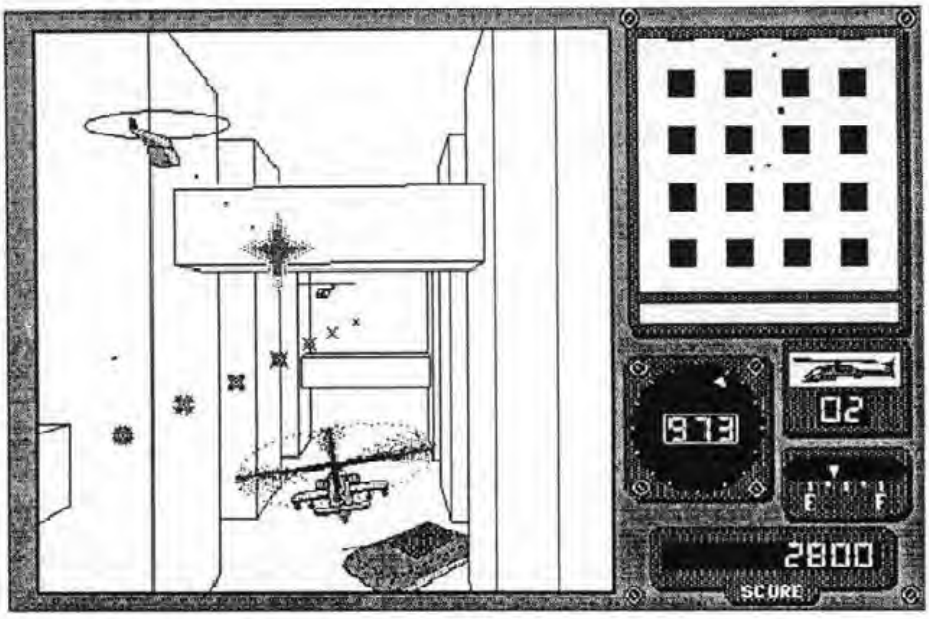
There is some amusing background material provided, which contains a couple of vital hints on basic flying skills, in a rambling story intended to put the game into a larger picture - perhaps Silicon Beach have another game planned there, maybe of the Balance of Power flavour?

Definitely Recommended! Buy this game, and I'm sure Silicon Beach Software will keep on writing them!



"Are you still listening, Mandrake?"

"Now jest you grab that mouse and go on down there and HIT THOSE RUSSKIES!!!"



info

Product :	Apache Strike
Publisher :	Silicon Beach
Available from :	MacSerious Company 17 Circus Park Place Glasgow G3 6AH
Price :	£ 34.95 + VAT
Value :	♦♦♦♦♦
Performance :	♦♦♦♦♦
Documentation :	♦♦♦♦♦

Granny Smith's

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Our policy is to provide software tools and useful ancilliary software for your developments. We have under development many useful new items which will be available over the coming months. The first few products are listed below and are scheduled for release at the end of August 1988.

FontWare:

RF1	Fonts 0 to 20	£22.95

StackWare:

HD1	6502 CPU debugging help	£22.95
HS2	Comms help (codes & pinouts etc)	£10.95
HV1	VMS help (DCL)	£16.95
HV2	VMS help (Fortran)	£16.95
HV3	VMS help (System services)	£16.95
HV4	VMS help (Run time library)	£16.95

All the products listed here are new and original works and are only available from ContactRight Ltd. All prices are inclusive of VAT and postage.

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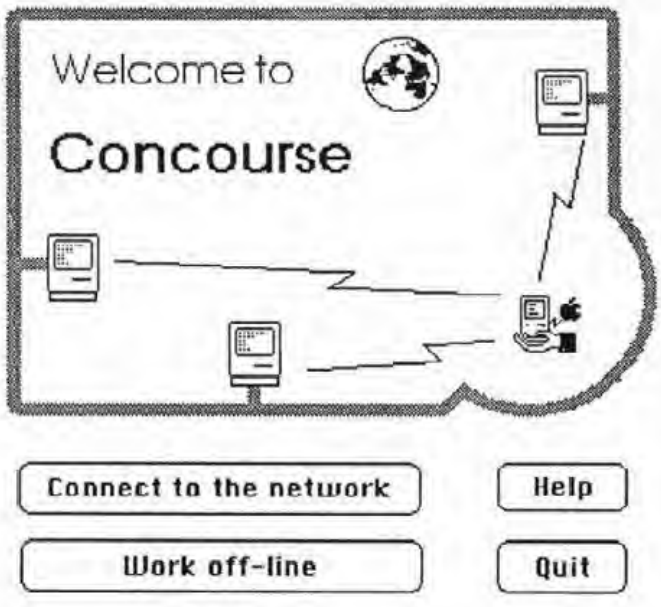


Apple Concourse is a new Apple-sponsored bulletin board, which has been "on the horizon" for some time. Currently, it is undergoing Beta-testing, and is expected to be available soon.

Apple Concourse will provide an information service for all Apple users. The communications interface is effected via the PSS network, allowing access to a wealth of facilities.

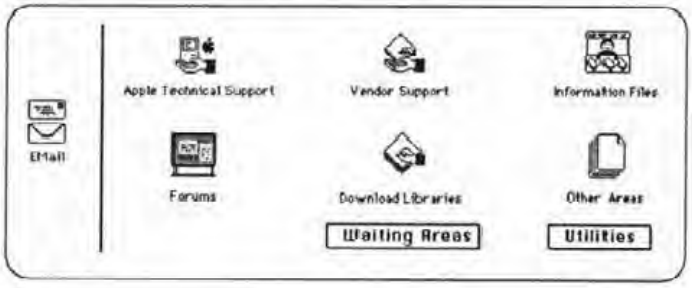
One of the main features is the Macintosh interface, which makes the communications aspects easy. Currently, the software assumes that an autodial modem is available, but modifications are being made to allow the interface with manual modems.

The system gives access to electronic mail facilities, including access to other information services (e.g. Telecom Gold); forums for discussions, questions and answers; a link to the technical support team; libraries of information, organised by topics; HyperCard stacks and shareware.

As the system is accessed via the PSS system, callers will be able to access for the cost of a local call (in most areas of the UK). In addition, charges will be levied according to usage.

The system has been developed in Scotland, and more details may be obtainedfrom:

William Martin, Alternative Data, The Park, Forres, IV36 0TZ, Scotland.
Telephone 0309 30700



Mac Library

There are two Update Disks to be added to the Macintosh Library this month, together with eight disks of HyperStacks.

Disk 907 Update 7

Archive A HyperCard Documenter which produces a card for every object in your stack (background, card, button etc), showing a description of its attributes and its script if any. There's also a space to add notes.

Comment filter Strips comments from source code files in either Pascal, C, or assembly. It is limited to text files < 40K, but that can easily be changed.

FileSplit This is FileSplit, version 1.1; it's a utility for splitting large files (especially BinHex files) into chunks manageable by network-mailers.

GuardDog GuardDog is a shareware cdev which, when set, prevents anyone from renaming or moving files on the desktop.

MPWtools src You should have the following files:

mtar.c - (MPW C source) An MPW tool for creating unix-compatible tar archives.

muntar.c - (MPW C source) An MPW tool for extracting files from unix-compatible tar archives.

makefile.hqx - A binhexed MPW make file for these two programs.

NoteTaker a Note Pad Clone using the new textedit and popup menus. Don't try running it without at least version 4.1 of the system.

Random If you have a MacII and the two files named "StartupScreen" and "DeskPicture" with resources with ID=0 and up (i.e. you have two files with multiple startup screens and deskpictures, saved as resources) Random will switch the present ID=0 resource, with one of the others.

SoundLeech will convert sound Resources to sound Data.

Sounds Used by the SoundMaster cdev

"Completely operational" is a great startup sound.

"My mind is going" is a great shutdown sound.

"Scotty, beam me up", to use as a restart sound.

Finally, "Blerrp" is what I use for disk insertions.

ARRL Is a McPaint Version of the ARRL Diamond Logo.

Demo axis teaches about the Mean Electric Axis (MEA) of the electrocardiogram. There is a 10 "slide" tutorial.

DtC Desktop Calculator DtC is a RPN calculator with four registers in stack. There are 20 additional registers (r00 - r19) which are accessed with STO and RCL commands.

PS Help This desk accessory provides on-line PostScript help. It requires the "PostScript.Help" file distributed with Cricket Draw to be placed in the System Folder.

PSBU PreSelective Backup Utility. Sometimes you don't know exactly which files you should backup. With P.S.B.U. you can override this problem by supplying filename patterns with wildcard characters.

P.S.B.U. works like an extension to the Finder. When double-clicking a P.S.B.U.-document, the backup specification will be executed and after a successful backup the application will return directly to the Finder.

Map Cdev Contains the Map Cdev and ColorMap Scrapbook.

SF Vol Is an Init which adds a popup menu to the 'Standard File'.

Disk 908 Update 8

Anim Cursor Contains three new animated- cursor sets that can be installed into Finder 6.0. If you're tired of the wristwatch-with -rotating-hands, you can now have: a little hand counting 1-2-3 with its fingers; a rotating image of the planet Earth; or an hourglass complete with trickling sand.

AppMenu ApplicationMenu is a simple INIT that provides a menu of the current applications under MultiFinder™.

MenuSelect FKEY This FKEY is numbered 8 at present- use the ResEdit program to install it into your System File

MandelZot MandelZot 0.9 is a program designed to calculate and display the Mandelbrot set. It will run on any machine from a Mac Plus on up to a Mac II with a 24-bit color card; System 4.1 or later is required.

Pram fix This file contains the PRAM patch for a Mac II in INIT form. It (I don't know how) keeps PRAM mess-ups resulting from bombs from causing your Mac II to fail to recognize your hard disk at startup.

Printer App The Printer Application for configuring the LWprinter driver to suit your personal preferences.

Scroll2 Scroll2 is a CDEF (control definition resource) which replaces Apple's standard scrollbar CDEF. It saves you time by letting you scroll either way from either end of the scrollbar.

SCSI accelerator SCSI Accelerator is a patch to the Mac's SCSI-dispatch code; the author reports that it substantially increases hard-disk throughput (especially if the disk is subsequently reformatted with a lower interleaving ratio).

ShoveIt shoveit.a - (MPW assembler source) An MPW tool for creating Stuffit-compatible archives. The syntax is: shoveit outputfile inputfiles...

compstream.a - (MPW assembler source). A library for doing unix-compatible compression and decompression.

makefile.hqx - A binhex'ed MPW make file for this program.

Super Convert A handy program that converts graphics files:-

FROM	TO
TIFF	TIFF
Thunderscan	EPS (Ascii)
Superpaint(laserbits)	EPS (Binary)
	Thunderscan
	Superpaint (laserbits)

From the makers of Super Paint - Silicon Beach Software. Uploaded with permission.

Time Keeper TimeKeeper displays an analog clock in a circular window on the screen. It runs in the background under MultiFinder, and uses MultiFinder's WaitNextEvent call. It will run without MultiFinder as well, although this isn't very interesting.

VT100 This is the binary of the

VT100 Maculator program. There is no documentation with it YET, although the operation is self-explanatory in the author's opinion. This is probably the closest to TRUE VT100 emulation anyone will ever get on the Mac.
Aask Aask finds all files of type INIT, RDEV, cdev, xNIT, xDEV, or xdev that have one or more INIT resources in them and have one or more ICN# resources in them. A file no longer needs ICN#s to show it. Aask disables a file by changing the first character of the file type into an "x", so that INITs become xNITs, RDEVs become xDEVs, and cdevs become xdevs. If a change is temporary, Aask puts a small piece of code in the system heap that will turn the files back by patching _InsertMenu. Aask will attempt to delete the small piece of code if possible. If another INIT has patched _InsertMenu, the data is discarded but the code must remain in the system heap.
Fontonize Fontonize (Another 'cdev') An application font selector. Fontonize has a scrollable list with ALL fonts installed.
Icon Grabber This DA lets you copy any icon from any file and paste them into your document as a picture without doing screen copy in Finder and use MacPaint one more time....
McSink 5.0 A summary of the changes in the most recent versions of McSink.
SuperClock To allow you to configure the clock just the way you want it, SuperClock! includes a cdev (Control Panel device). By clicking on the SuperClock! icon in the Control Panel window you can configure the following:
• clicking on the clock will either toggle between the time and date, or just display the date for a few seconds and then resume display of the time;
• whether or not to display the time with seconds (1:23:45 or just 1:23);
• whether or not to have "AM" or "PM" appended to the time when the time is displayed in 12-hour mode (1:23:45 AM or 1:23:45);
• whether or not to flash the colons in the time on/off: "12:34:56" <->"12 34 56" (especially for those of you who elect not to display the seconds);
• whether or not to assume that OnCue™ or Easy Access is installed and to make room for its icon on the right end of the menu bar.

Disk 296 HyperStacks 36
Hyperphoto File for storing info on a collection of negatives.
Hyper Stocks the latest in trading techniques.
MacVendors 4th Qtr 87 -software suppliers.
Sales and Payroll for tracking sales volume and payroll costs daily.
Time Calc enables day of week and elapsed period to be determined.
Trapeze Stackware a QuickTour and Demo of Trapeze 2.0.
UseLog when installed will keep a record of your HyperCard activities.
Work Stacks adds a few extra features to some standard stacks.

Disk 297 HyperStacks 37
Benoit - the world's first fractal generating DA and first Mandelbrot program to generate fractal 'music' based on either the Mandelbrot or Julia curves generated.
Month - another calendar.
4-track allows you to record the levels, gains and the highg and low EQ settings for each track/song.

Disk 298 HyperStacks 38
Learn to Read Russian 1.1 teaches recognition and pronunciation of the letters of the Russian alphabet.
Read More Russian gives more practice reading and pronouncing Russian.
There are also some Stackware browsers on this disk.

Disk 299 HyperStacks 39
Russ 1 Learn to Read Russian Lesson 1, the first in a series of lessons - • it assumes knowledge of the lessons on Disk 298
Russ 2 Learn to Read Russian Lesson 2 an intro to grammar and cases.

Disk 300 HyperStacks 40
This disk contains the following 'Fun Stacks':-
Concentration, Countdown, Frustration 2.0, HyperQuest 1.03, Just for Fun, Lottery, StackHeads Anonymous, Stars.

Disk 301 HyperStacks 41
Classroom Administrator - can calculate grades and there is also a lesson plan module.
Easy Add an adding game for infants.
Flash Cards to help children to read words
Fort Langley - details of a field trip
New Periodic Table v 2.0
Ollie's New Math 1.0 - game
SGS States Stack - states maps
Senate Stack
Spelling Stack - uses MacinTalk
Story Machine - allows a story to be built up from phrases ina number of scrollable windows.
Study Systems

Disk 302 HyperStacks 42
PICT Stack - uses Hyperphoto File on Disk 296 and MacDraw 1.95. A few of the images are suitable for use with MacDraw. Here are symbols from PICT Stack:-

Artworks - a file of pictures, there are approximately 40. Seems to want HyperCard 1.1.
HyperStation 3.2 - A completely self-contained 'launch platform' for hard disk drive management.
Photo Album - only seven pictures in at the moment but can be added to - some pictures good.

Disk 303 HyperStacks 43
APD Generator 1.1 - puts 'Function' in menu bar. It enables printer drivers to be customized for Pagemaker 2.0 or later.
Home Suite - an alternative Home Stack with some nice pictures.
Portfolio - another Home Stack replacement.

Members' Small Advertisements

Members Small Adverts are FREE. We reserve the right to edit and or omit them. They are placed in this Magazine in good faith. Apple2000 holds no responsibility over items advertised, and buyers purchase at their own risk.

FOR SALE

Apple 2+ clone, Z80 CPU, 80-column card, two disk drives plus card, monitor, software (including Wordstare, Dbase II , Supercalc):.....**£250 o.n.o.**

Apple 2e clone, Z80 CPU and 64K/80-column card, two disk drives plus card, monitor, Grappler card, Epson FX-100 clone, software (including Wordstar, Dbase II, Supercalc, Appleworks):.....**£350 o.n.o.**

Offers welcome. Quick sale wanted.
Telephone Alex Bermingham on.....[illegible]

FOR SALE

Apple //e (enhanced) with extended 80-column card, SuperSerial Card, CP/M card and software
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Apple Imagewriter II dot matrix printer
Joystick, SuperCalc 3a, dBase II, Applewriter//
Numerous manuals, magazines and disks
Various boxes of paper and labels

ALL INCLUSIVE PRICE.....**£750**
Telephone David Beard (evenings) on..[illegible]

FOR SALE

Apple][+ Hardware:

64K Apple][+ computer with fan.....**£50**
Detached keyboard for Apple][+.....**£30**
2 slim teak disc drives.....**(each)£20**
Amber monochrome monitor.....**£40**
Colour monitor.....**£100**
2 disc driver cards.....**(each)£10**
Language card.....**£10**
2 Z80 cards.....**(each)£10**
192k virtual disc.....**£50**
SuperSerial card.....**£20**
2 monitor swivels.....**(each)£5**
Power supply.....**£15**
10 Disc storage boxes (50 discs).....**(each)£5**

Telephone J.R.Wood on.....[illegible]

FOR SALE

Apple][Europlus
Twin disk drives (with controller card)
Colour monitor
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All Manuals, plus 6502 Assembly Language programming, DOS Tool-Kit & Programmers Aid.
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Telephone Frank O'Hare on.....[illegible]
(daytime - ask for Computer Dept)

FOR SALE

All Issues of APPLE USER from Liverpool Software Gazette, through Windfall to the very last (R.I.P.). A collector's item, I will not split. A unique opportunity not to be missed! Face value £98.75, best offer gets the lot. All complete and in good condition.

Telephone Martin Twelftree on.....[illegible]

FOR SALE

RamFactor with 1Mb for][+, //e and IIgs, with manuals and AppleWorks Expander software for][+
80-Column with softswitch for][+.
Simon Aristocard serial with manual.

Telephone Peter Dyson on.....[illegible]

FOR SALE

Items for Apple //e:

Cirtech Flipper 1-megabyte memory board, with program manager disk & manual.....**£100**
Darkstar Snapshot card with Shuttle, Copykit, Shell and Printerrupt software & manuals.....**£95**
AppleWriter II (DOS 3.3, //e only) + manuals...**£15**
PFS File, Reports and Write (DOS 3.3) the lot, with manuals.....**£45**
'Phone Michael Pegum (evenings) on..[illegible]

Advertisers' Index

Alphatronics	3	Holdens Computer Services	39
Apple Computer (UK) Ltd	5	MacEurope	Inside covers 47/49/51
Bidmuthin Technologies Ltd	3/33	The MacSerious Company	Back cover
Camelot Computing	16	MacSoft	67
Celtip Computers	53	MGA MicroSystems	7/9/11
Chameleon Software	55	Open Apple	77
Cirtech (UK) Ltd	29	Phase Separations	77
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RAMdisk contents are protected, so you can safely work on your programs *and* data at memory speeds. There's a superspeed SCSI and the 68881 maths co-processor option makes spreadsheets (and other SANE programmes) run 60 to 100 times faster. There's a big screen attachment, too.

Of course, it's as crash proof as the Turbo SE. Fits in minutes without modifying the Mac and it costs only **£1,195**.

TurboMax also re-enhances the 512K Enhanced for an amazing performance.

(128K owners... we'll get you to 512K, and then add TurboMax). Connect your SCSI hard disks directly through the superspeed SCSI port. No mods to the 512K case- the SCSI port exits from the battery compartment.

Bigger software- bigger memory.

To run Apple's great new software you are going to need bigger memory. For scanning, and many other programs, too, 1MB is not enough.

But you just can't risk fitting second-rate memory. You put a lot of work at stake when intermittents crash your system (as they will).

So MacMemory offers you **crash-proof** memory with MaxPlus 2x4S surface mounted megabit chip modules meeting or exceeding Apple's own standards in every respect.

You'll feel safer knowing your MacMemory enhancements use first quality chips (not the cheaper production-reject units used by some others), and are 100% tested at each stage and are even given a final 72 hour burn-in in an actual Mac. No-one else takes this much trouble to give you error-free performance!

MaxPlus 2x4S take your SE to 2.5MB (and onto 4MB), support all Apple standard add-ons and also plugs into Turbo SE. No modifications are required of any kind.

Mac Plus upgrades economically to 2MB and onto 4MB without any mods. Your every need is catered for with different modules, including big screens.

You'll love what the Max2 does for your 512K; Max2 gives 2MB, upgrades to 4MB, and works with old or new ROMs and allows a SCSI port to be fitted when you're ready.

You're not alone - we started off with 128K's too! So don't send yours to the knackers yard. We'll take you to 512K- and then Max2 or TurboMax promise you a new world of speed and software.

You need more than 1MB to do anything useful and MaxPlus 2x4S takes you to 8MB!

Remember, even your beautiful MacII will crash, no matter how fast, through intermittents if you fit not-quite-industry-standard memory.

Treat your wonder machine to MacMemory.

It's crash proof!

Hardware is hardware. But support for it can range from "total" to "non-existent".

MacEurope's is total. All the facilities you expect from a major manufacturer.

And we work closely with only the best dealers. You can expect and get the best service in the industry. (Ask our customers....)

Call Colette Fanning on **(0603) 630636** for more info, super data sheets and details of where you can see our products in action.

MacMemory from MacEurope

The Granary, Trowse Bridge, Bracondale, Norwich NR1 2EG, England. Tel: (0603) 630636

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Mainstay Europe — Quality Software for the Mac

Think 'n Time

New

Think 'n Time is the Macintosh visual organization tool that significantly improves productivity. It's great for developing and organizing ideas, projects, tasks, meetings, schedules, estimates and reports.

Organize Activities & Projects

Visually organize information using an extended desktop. Think 'n Time, T'nT for short, builds an organized tree of sheets and piles of electronic paper.

You create, open, close, collapse, expand and rearrange sheets and piles, all with point and click ease.

Drag sheets or piles to a new position in the tree to reorganize a subject. T'nT links text information to dates and times and numeric values in a completely integrated manner. It's handy for everything from project management to remembering important appointments and birthdays.

Organize Your Future!

Integrated date and time management functions provide an easy way to plan your personal and business activities. T'nT allows you to more effectively plan, schedule, organize, arrange, delegate, direct, control, monitor and analyze your work.

No matter how complicated your life, a "What's Next?" view provides a time-line organization, keeping you on track. A powerful search and browse capability gives you instant recall. Here's real help to handle multiple tasks and projects.

A desk accessory, T'nT is always available for taking down information and accessing ideas, dates, notes and data, eliminating slips of paper.

Think 'n Time £84.95

MacFlow 2.0

New Version

Fast, Clear Charts.

Simply drag chart objects into place and connect them with flow lines. Draw flowcharts up to ten times faster than with drawing programs or pen and pencil. Enter text into symbols, lines and labels with ease.

Changes are just as easy. Resize symbols and move them around as you like; lines stretch and stay attached. Changes are a snap with automatic grid alignment. Resize symbols and add or delete elements with cut, copy and paste ease. Graphically organize even complex programs, projects and structures fast!

Symbols, Your Way.

Use ANSI standard flowcharting symbols or custom design your own symbols with MacDraw™ or any "draw" type program. A hierarchical organization links a symbol on a top level chart to an entire lower level chart.

MacFlow 2.0 ..... £175.00

MacSCHEDULE

New

Visually plan how a project will get done. MacSchedule lets you create clear, graphic schedules fast! Schedules that took hours, now take only minutes. Revisions that almost meant starting from scratch now only take a few seconds.

MacSchedule allows the creation and modification of a schedule directly without elaborate flow diagrams or detailed tables of dependencies.

Status tracking is a snap. Work progression, early and late starts and schedule slips are easily handled. Schedules can be yearly, quarterly, monthly, half-monthly, weekly, daily or free-form. Print out clear, attractive presentations on an ImageWriter or LaserWriter.

MacSchedule addresses the real needs of people making real schedules. It's not complicated PERT chart software that almost requires a degree in project management.

MacSchedule is for the practical, top-down thinker who wants to clearly see the entire picture and then make sure that the job gets done.

MacSCHEDULE £175.00

V.I.P 2.5

New Version

Programming of the future, here today! Visualize your logic and program at a speed you never thought possible! Use V.I.P's graphic editor to develop an icon-based, on-screen flow chart which runs.

You program in a top-down, structured manner using objects, automatic logic forms, nested levels of routines and over 180 pre-compiled procedures

Power for professionals.

Develop and market your software using the run-time package with no extra license fees. V.I.P's also great for prototyping complex routines and models, even for other computers.

Follow-on products make V.I.P the language of choice. These include a series of translators — program visually and then turn a V.I.P program into source code for your favorite C or Pascal. Also available are procedure sets for speech, grid, ISAM, database, matrix, etc...

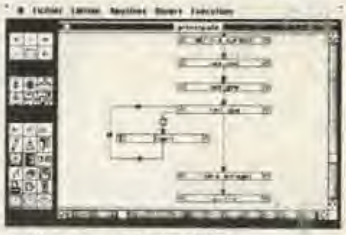
HyperCard External Procedures!

Starting with the new 2.5 version, V.I.P will let you write external procedures and functions for HyperCard™ (XCMD's & XFCN's) and V.I.P itself. This will require the new Translators to C.

V.I.P 2.5 ..... £99.95

Grid Manager £54.95
Telecom Manager £99.95
Advanced Manager I £89.95
DataBase Manager £245.00
Matrix Manager £89.95

Translators (Lightspeed C & Pascal, MPW C & Pascal, Turbo Pascal) £89.95



(All prices exclude VAT)

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MacSerious

The MacSerious Company

17 Park Circus Place, Glasgow G3 6AH Phone 041-332-5622 Fax 041-332-3209

In Europe

Mainstay Europe
Rue des Atrebates, 71
B-1040 Brussels
Belgium
Tel (322) 733.97.91
Fax (322) 734.89.12
Telex 62 239 Micro b

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